

The KEYSTONE

The ORGAN of the JEWELRY & OPTICAL TRADES



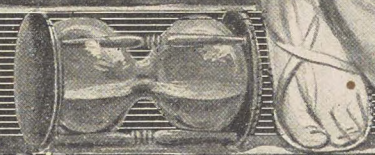
YOUR SUBSCRIPTION HAS EXPIRED

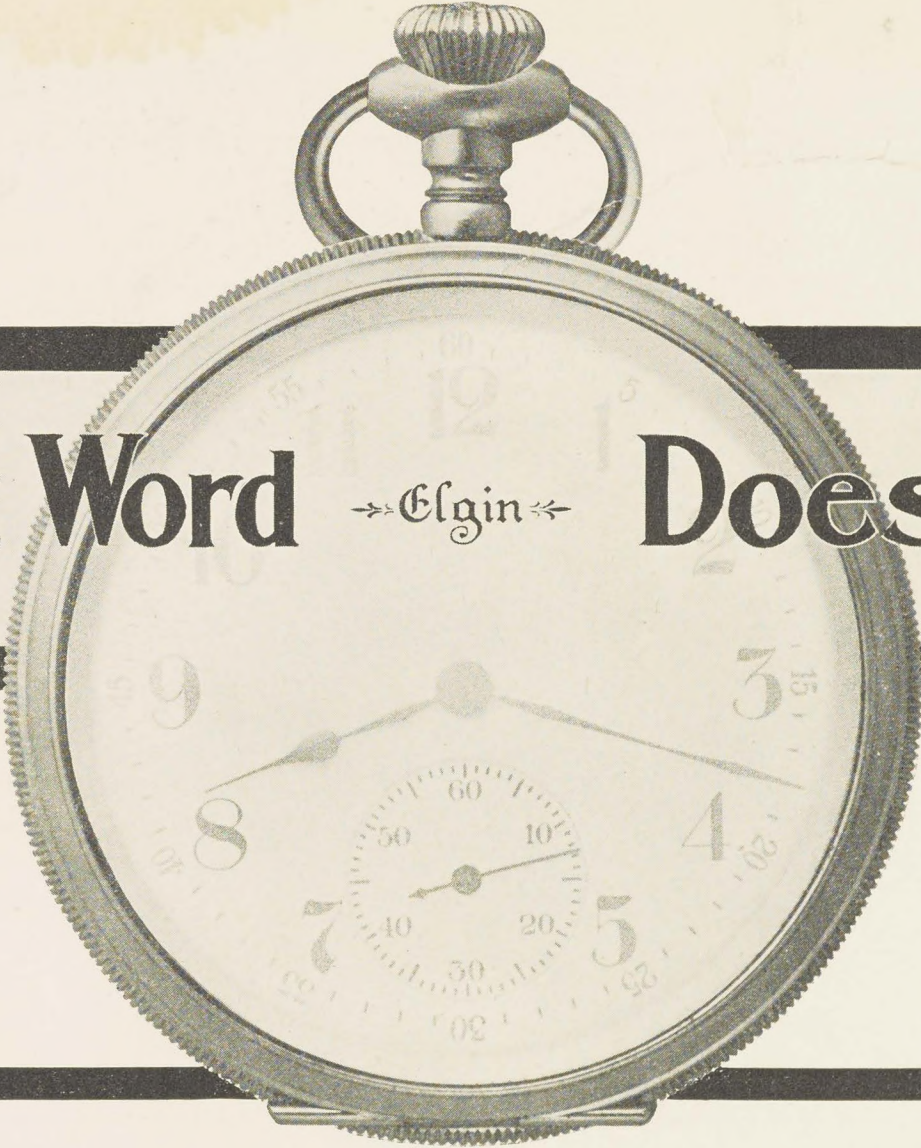
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BY THE KEYSTONE PUBLISHING CO.
PHILADELPHIA

Vol. 27

April, 1906

No. 4





That Word *Elgin* Does It

The millions of Elgin movements made since 1867 have caused the word Elgin to become a synonym for the highest accuracy and reliability in timekeepers. The most isolated dweller in the humblest hamlet has heard of the Elgin Watch and knows that it is the Standard. That is why the

ELGIN WATCH

sells itself, for all that most buyers need be told about a watch is that it is an Elgin. Make yours an Elgin store.

See Jobbers' List for prices or write the Company.

Every dealer is invited to send for the Elgin Art Booklet, "Timemakers and Timekeepers," illustrating the history and development of the watch.

ELGIN NATIONAL WATCH COMPANY,

Factories, Elgin, Ill., U. S. A.
General Offices, 131 Wabash Ave., Chicago.

New York Office, 11 John Street.
San Francisco Office, 206 Kearny St.

Established 1873

See our lines of goods
for articles suitable
for gifts

A full line of PHOTO.
FRAMES in both Sterling
Silver and 14 K. Gold Filled.
CROSSES, PENDANTS,
NECK CHAINS, LORG-
NETTE CHAINS, LOCK-
ETS, CHARMS, VEST,
DICKENS and FOB
CHAINS, BRACELETS,
PINS, BROOCHES, EAR-
RINGS, LINK BUTTONS,
SCARF PINS, HAT PINS,
BARRETTE PINS, WAIST
SETS, HAIR CHAIN
MOUNTINGS, DOG COL-
LARS and BELT BUCKLES.
RIBBON BOOK-MARKS
and a large variety of useful


Sterling Silver Novelties.

MANICURE and TOILET
SETS and pieces, also DESK
SETS, SEWING SETS,
TRAVELING SETS,
SHAVING SETS, SMOK-
ING SETS, FLASKS and
other goods suitable for gentle-
men's use.


Do not fail to order a few

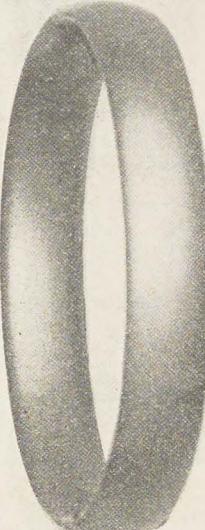
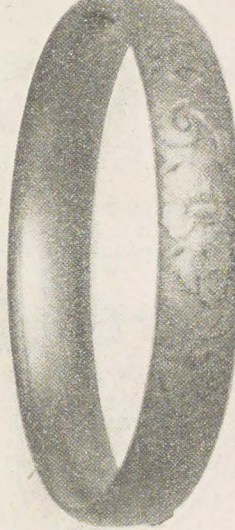
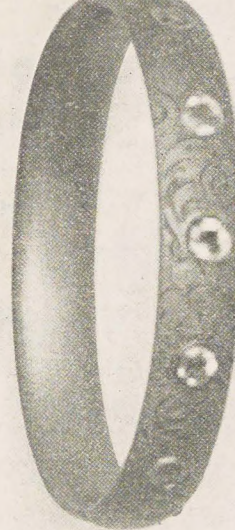

of our new bracelets

"The Armlet"



The "ARMLET"













474
474 POL.
475 ROM.
506 O. E.

476
476 Rose Gold Half Chased
507 O. E.
530 Rose Gold Full
538 O. E.

477
477 Rose Gold, Half Chased, 5 Stones
522 O. E.
546 Rose Gold " " 6 Brillants


Color of stones as ordered, Amethyst, Ruby, Sapphire, Olivene, Topaz, Aquamarine, Almondine, Turquoise and Rose Stones.
Bracelets made with secret joint and push catch. High-grade Seamless Gold-filled Stock.
Each bracelet in fine leatherette covered box.


BRACELET 473 ROSE.
COLOR OF STONES AS ORDERED.
Amethyst, Ruby, Sapphire, Olivene, Topaz, Aquamarine and Turquoise.
Two of the above Bracelets snapped together, makes a nice dog collar 14 in. long.

473


Locket 2825
Rose




Pin 3632
Rose and Green Brillants



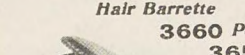
Pin 3629
Baroque Pearls and Brillants




Locket 2826
Rose




Hair Barrette 3660
Pearls 3659 Brills.




Cuff Pin 3624
Roman




Cuff Pin 3622
Roman



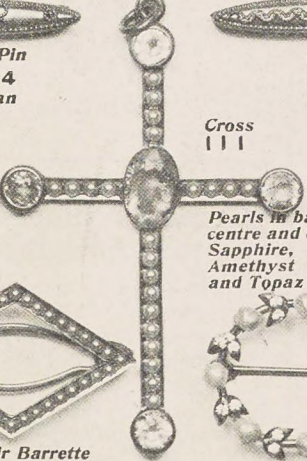
Hair Barrette 3652
Pearls 3651 Brills.



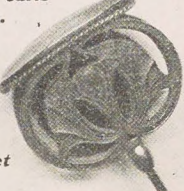
Hat Pin 710
Rose and Green Polish Signet




Cross III




Hat Pin 705
Rose Polish Signet




Links 751
Rosé




Hair Barrette 3658
Pearls 3657 Brillants



Pin 3603
Baroque Pearls and Brillants



Links 758
Green 757 Rose



These are only a few examples of our new goods; see our complete lines.

Theodore W. Foster & Bro. Co.
MANUFACTURING JEWELERS AND SILVERSMITHS,
100 Richmond Street, Providence, R. I.

WatchesWatches

Non-Retailing

means—that we protect the **Retail Trade** by **Positively Refusing** to sell any goods other than at **Wholesale**. Any **Jobber** who **retails** becomes a competitor of the **Retailer**.

Are you buying your **Watches** from a competitor of yourself? We are **not** your competitor, and we solicit your trade.

The Non-Retailing Company

Jobbers in

Watches and Chains

Lancaster, Pa.

WatchesWatches

2 Tulpstraat
AMSTERDAM

ESTABLISHED 1866

12 MAIDEN LANE (One flight up)
P. O. Box 1625 NEW YORK

Lissauer & Company
IMPORTERS

**TRY
US ON
DIAMONDS**

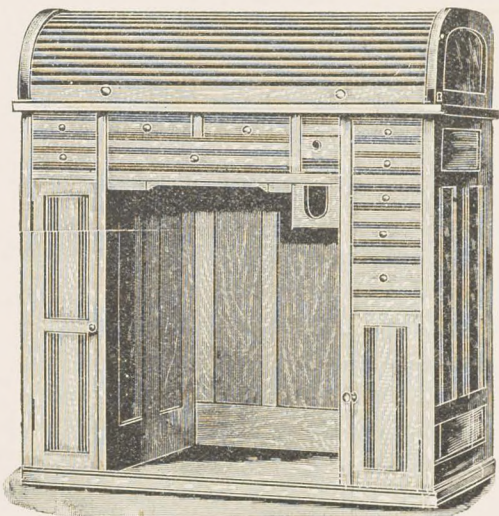
ORDERS
ARE
SOLICITED
EITHER
DIRECT
OR
THROUGH
OUR
TRAVELERS

Selection
packages sent
to responsible
jewelers

Our goods are
insured
while in transit

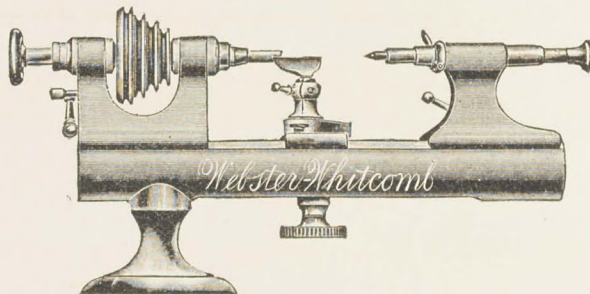
LATHE COMBINATIONS

Prospective purchasers of Watchmakers' Lathes should not fail to investigate the different combinations we furnish at special low prices. Any information that may be desired we will gladly furnish on receipt of request. We are not only desirous of selling these outfits, but above all of pleasing our customers. See our page in March issue for prices of **Combinations C and D**.

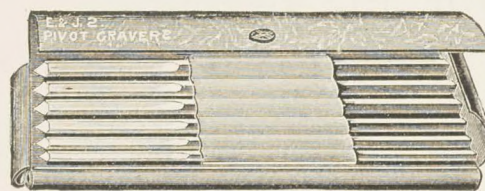


SOLID OAK BENCH No. 1

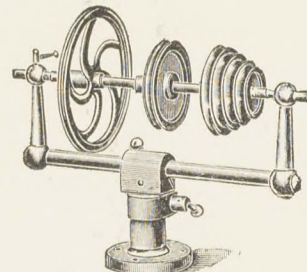
Well built, strong and handsomely finished. Not a cheap, trashy article, but made for service and a fit companion for a Moseley or Whitcomb lathe. Drawers lock automatically with closing of curtain.



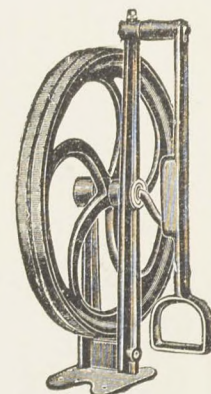
GENUINE WEBSTER-WHITCOMB LATHE
With 10-chuck combination



EXTRA QUALITY PIVOT GRAVERS
The finest made. They are especially well adapted for fine turning



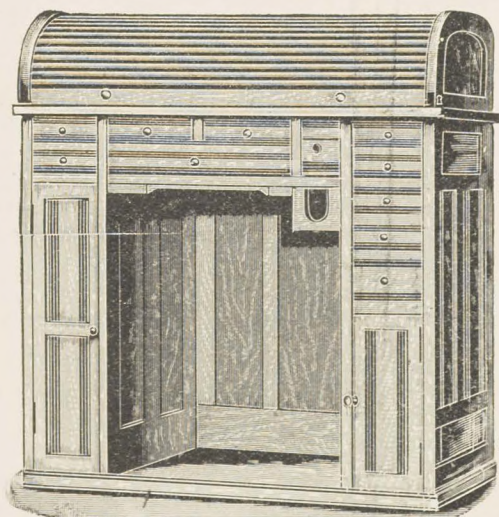
COUNTERSHAFT No. 9
Full Nickel-Plated



FOOT-WHEEL No. 15
Best Wheel Made

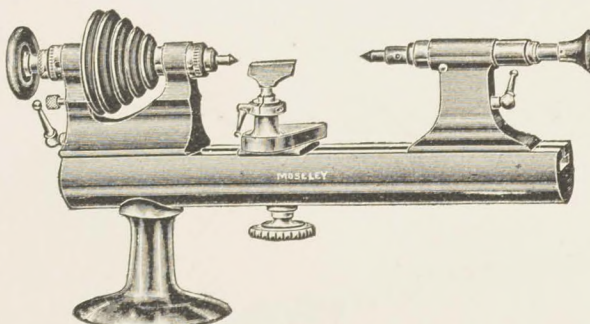
Lathe Combination A

All complete, as illustrated above, **\$57.88** net cash

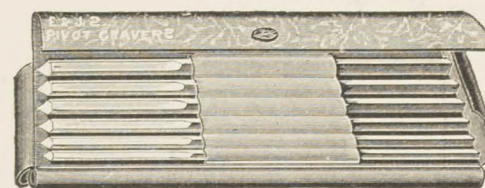


SOLID OAK BENCH No. 1

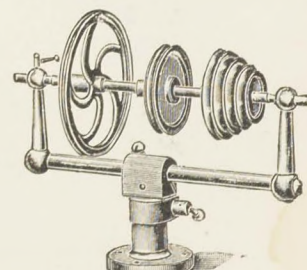
Dimensions, 43 inches long; 40 inches high; 26 inches wide. These benches are paneled in back and sides, and will not warp or split.



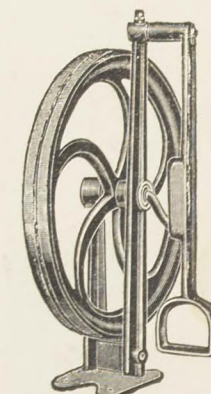
GENUINE MOSELEY LATHE No. 2
With 10-chuck combination



SET E. & J. S. PIVOT GRAVERS



COUNTERSHAFT NO. 9



FOOT-WHEEL No. 15
No Better Made

Lathe Combination B

Complete, as illustrated above, **\$57.88** net cash

No Jeweler or Watchmaker should be without our 1906 Tool, Material and Optical Catalogue. It is complete in all details, and quotes prices so a child can understand. Send your business card for a copy.

E. & J. SWIGART, Cincinnati, Ohio

The Dalles, Oregon
Gentlemen: Just received check No. 34204 for \$17.23 which is entirely satisfactory.
Yours truly, H. C. Liebe

Charles City, Iowa
Goldsmith Bros.
Gents.: Check for old gold to hand and is perfectly satisfactory.
Yours, G. I. Wood

Iola, Kansas
Gentlemen: Always more than satisfied with your returns.
Yours truly Geo. Bedell

Winterset, Iowa
Gentlemen: Received draft O. K. Many thanks for promptness and I accept same.
Yours truly, F. A. Garretson

117 Bleeker St., Utica, N. Y.
Goldsmith Bros.
Gentlemen: I am in receipt of your check for \$81.96 in payment of old gold and silver sent you. Same is very satisfactory to me.
Respectfully yours, Richard Perlen

Monticello, Ky.
Goldsmith Bros., Chicago, Ill.
Dear Sirs: Amount sent me for scrap gold is all O. K., being more than I expected to receive for it.
Respectfully, Walter Francis

Fort Pierre, S. Dak.
Goldsmith Bros., Chicago, Ill.
Gentlemen: Received your check to-day and very much pleased with the result for gold and silver.
Yours very truly, Otto Waelti & Co.

Park City, Utah
Dear Sirs: Your check for \$36.09 for old gold and silver that I sent to you received and we report that your valuation on same is all O. K. Many thanks.
Yours most respectfully, L. E. Hubbard

Terre Haute, Ind.
Goldsmith Bros.
Dear Sirs: Your letter with check enclosed, reached me this P. M. Will say that everything is most satisfactory.
Yours truly, C. D. Reynolds

"SEEING IS BELIEVING"

That is one reason why we believe in testimonials

We have so many commending our methods that we could publish them *ad libitum*, but, as space is expensive, we must content ourselves

541
Stayton, Oregon
Goldsmith Bros., Chicago, Ill.
Gentlemen: We are in receipt of check for \$45.15 which is satisfactory and we may have more business for you in the future. Thanking you for same, we are,
Yours truly, E. Roy

Union City, Tenn.
Messrs. Goldsmith Bros., Chicago
Gentlemen: We are in receipt of your check for \$112.85 for old gold and silver. Same is satisfactory to us and we thank you for it.
Respectfully yours, Porter & Radebaugh

Denton, Md.
Gentlemen: Your favor of the 27th at hand and must say that I am very much pleased and really surprised with your prices of same. Will send you some more in a short time. Thanking you, I remain,
Yours truly, C. H. Bullock

Frazee, Minn.
Goldsmith Bros.
Gentlemen: Received your check of \$20.29. It was perfectly satisfactory.
Yours respectfully, B. Gerber

Minneapolis, Minn.
Goldsmith Bros., Chicago, Ill.
Gents.: Check received, your promptness is excellent, and price is much more than I expected. I shall sell you all my gold and silver in the future.
Respectfully, S. Dobrin

Goldsboro, N. C.
Dear Sirs: Your check for \$73.18 received and thank you for your promptness and full worth of the old gold expressed you. This is not the first shipment made to you and find your reports always satisfactory.
Very truly, Robert A. Creech

GOLDSMITH BROS.

Sweep Smelters, Refiners
and Assayers

WORKS, 5826 Throop St.

OFFICE, 63 Washington St.

Chicago, Ill.

by publishing only a few.

We have satisfied hundreds of jewelers. **WHY** can we not get your business and **HOLD IT?** You to take no chance in the matter. If you are not satisfied with the size of our check, return it, and we will return your shipment in exactly the same condition as received, and pay all charges. Make us a trial shipment and be convinced.

Janesville, Wis.
Goldsmith Bros., Chicago, Ill.
Gentlemen: We are in receipt of your favor enclosing check, for which please accept our thanks.
Yours very respectfully, Hall & Sayles

Trail, B. C.
Goldsmith Bros., Chicago
Dear Sirs: Check received to-day and is entirely satisfactory. Thanking you for prompt attention, I am,
Yours respectfully, J. Sibbald

North Collins, N. Y.
Goldsmith Bros.
Gentlemen: Check received in payment for gold and silver. I am favorably deceived, as I did not expect to be rewarded so amply for the amount of scrap sent you. I am more than satisfied.
Yours truly, W. M. Gale

Cuyahoga Falls, Ohio
Dear Sirs: Your check No. 34521 for sweeps is to hand and it is much more than I expected. I shall continue to save them hereafter and shall send to you.
Yours truly, B. F. Phillips

Idaho Falls, Idaho
Goldsmith Bros., Chicago
Gentlemen: Your check for old gold received, and is perfectly satisfactory. Thanking you for same, I am
Yours truly, C. H. Norton

Wellington, Kansas
Gentlemen: Check \$11.77 in payment of gold and platinum scraps has been received and is satisfactory. Thanking you for the remittance, I remain,
Yours very truly, E. B. Roser

Belvidere, Ill.
Goldsmith Bros., Chicago, Ill.
Gentlemen: Your check for old gold and silver received. The amount was more than I expected, and I thank you very much, so I will remember you in the future.
Very respectfully, R. B. Philbrick

Lowell, Michigan
Gentlemen: Your estimate is entirely satisfactory, as usual. Many thanks for your promptness.
Yours truly, U. B. Williams

Massena, N. Y.
Gents.: Check received for old gold and silver, very satisfactory. Thanks for promptness in sending check.
Yours truly, A. J. Nelson

Newport, Ky.
Gentlemen: Check for gold received and am perfectly satisfied. Thanking you for promptness, I am,
Yours truly, Robt. J. Hess

Sherman, Texas
Dear Sirs: Check sent for old gold is entirely satisfactory, and we thank you for your promptness.
Yours very truly, F. Ely & Sons

Comanche, Texas
Gentlemen: Your draft for old gold and same is highly satisfactory as is always the case.
Yours truly, George Shorsh

Aberdeen, Miss.
Gents.: Yours to hand enclosing draft. Same is perfectly satisfactory.
Yours truly, Maier Jewelry Co.

Columbus, Ohio
Gentlemen: Your check is perfectly satisfactory for old gold and a little more than I expected.
Yours respectfully, J. H. O'Daniel

Superior, Wis.
Gentlemen: Received check for \$60.20 in payment for old gold and silver and is very satisfactory.
Yours respectfully, Huber & Bunker

We are paying 55 cents an ounce for Old Silver

A GOLDEN RULE

Trade with us as you would have others trade with you

Get on our satisfied list and get the refining end
of your business off your mind

THE BROWN & DEAN COMPANY

Gold and Silver Refiners

102 and 104 Richmond Street

Providence, R. I.

Art Metal Ceilings

FOR INTERIOR FINISH



Write us for information
and prices

The Canton Steel Roofing Co.

CANTON, OHIO

New York Branch, 525 West Twenty-third Street
Minneapolis Branch, 253 Second Ave. S.

Very attractive.

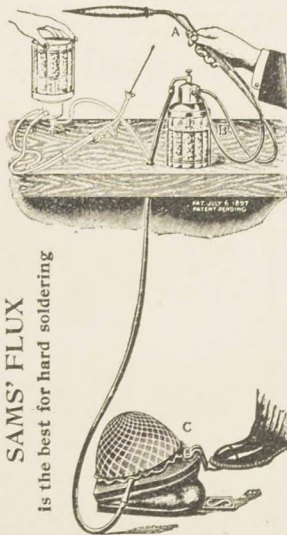
Admit of highest
degree of orna-
mentation.

A nice ceiling at
low cost.

Will not crack,
burn, peel or fall off.

The right kind for
every jewelrystore.

Insist upon having
"Canton" Metal
Ceilings when you
remodel your room.
You will never re-
gret it.

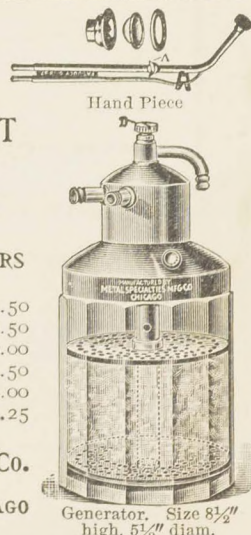


SAMS' SAFETY BLOWPIPE OUTFIT FOR JEWELERS

The original Sams'—
Greatly improved
FOR SALE BY ALL JOBBERS

Outfit complete . . .	\$12.50
Outfit without bellows, .	8.50
Generator (B) . . .	6.00
Blowpipe (A) . . .	2.50
Foot Bellows (C) . . .	4.00
Sams' Flux25

Metal Specialties Mfg. Co.
(Sole Mfrs.)
18-24 W. Randolph St., CHICAGO



C. O. BAKER, Pres.

C. W. BAKER, Vice-Pres.

PLATINUM

and its alloys, made expressly for jewelers' use

GRAND PRIZE, UNIVERSAL EXPOSITION

St. Louis, 1904

GOLD MEDAL, Lewis and Clark Centennial Exposition
Portland, Oregon, 1905

Awarded

BAKER AND CO., INC.

Newark, N. J.

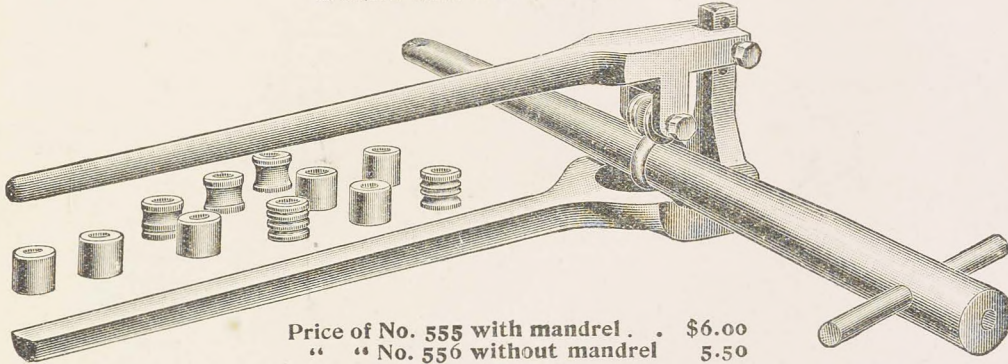
120 Liberty St., New York City

Ring Expander No. 555 (PATENT APPLIED FOR)

A perfect tool, that will expand a ring without in any way injuring same and making no other work necessary on the article, except ordinary buffing.

This tool is supplied with twelve rolls as follows: Six grooved, hardened, for different shapes and sizes of bands, one plain, for use on flat rings and five flat, soft, which are to be tempered and polished after being cut to any desired shape the operator may require, for the special shapes he may have in his stock. The tool is made in the best possible manner, polished and nickel plated. As many Jewelers have a supply of mandrels, price is given with and without same, but using only a good smooth mandrel is advised. It will expand either set or band rings, from a fraction of a size to four sizes, according to the weight of the ring, in three to five minutes and the ring will then be ready for the customer.

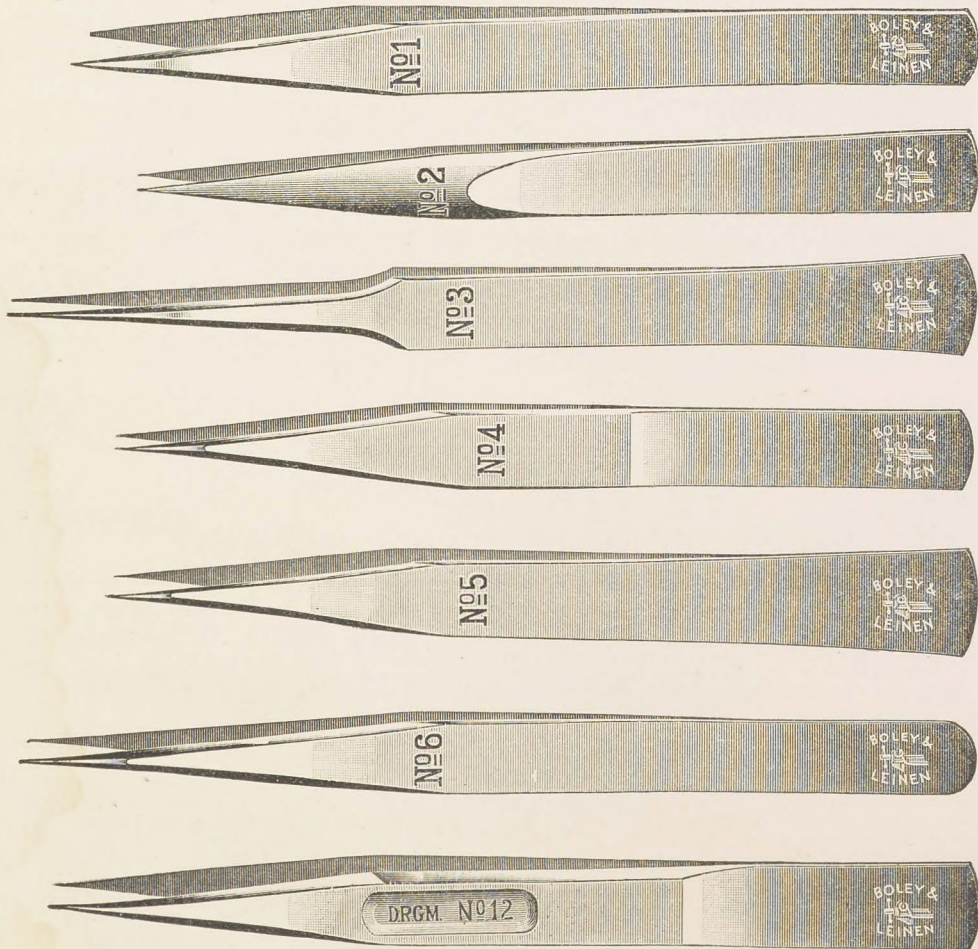
A TRIAL WILL CONVINCE YOU



Price of No. 555 with mandrel . . \$6.00
" " No. 556 without mandrel 5.50

GENERAL INSTRUCTIONS—Place large end of mandrel in ordinary bench vise; select roll to fit band to be expanded; place roll in tool, as shown in cut; place ring on mandrel, pushing it up until it fits tightly; adjust handles of tool, so as to secure a good, even grip and produce pressure to suit the weight of the ring being expanded. Place the fingers of the left hand under the tool and the ring, always keeping the ring tight on the mandrel; grasp both levers of the tool with the right hand, using pressure as the hardness and thickness of the ring may require. Work tool up and down, turning ring at the same time, so that it will expand evenly all around. Repeat operation until the desired size is reached. Turn the ring on the mandrel and repeat the operation, so that the ring will be the same size on both edges; repolish with a rouge buff and the ring is ready for delivery. As the rolling process produces an extra temper or hardness in the gold it may be necessary, in some cases, to anneal the ring, where it is to be expanded two or more sizes. This will be evident by the ring not expanding readily.

Do not compare this expander with any device where the ring is not always completely filled with the mandrel as one of the main advantages of this tool is its ability to expand evenly keeping the ring round and without lumps, at all times.

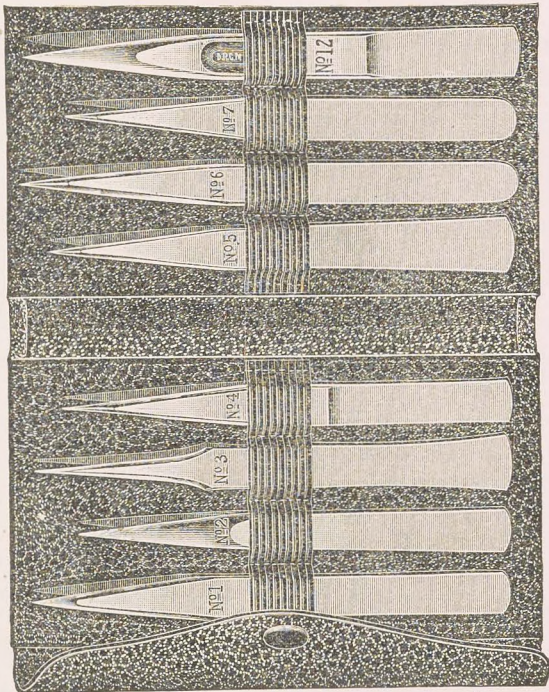


PERFECTION IN TWEEZERS

B. & L. Tweezers are most carefully made and full tempered. They have not their equal on the market.

PRICES	No. 1. B. & L.	40 cents	No. 5. B. & L.	40 cents
	No. 2. B. & L.	35 "	No. 6. B. & L.	45 "
	No. 3. B. & L.	50 "	No. 12. B. & L.	40 "
	No. 4. B. & L.	40 "		

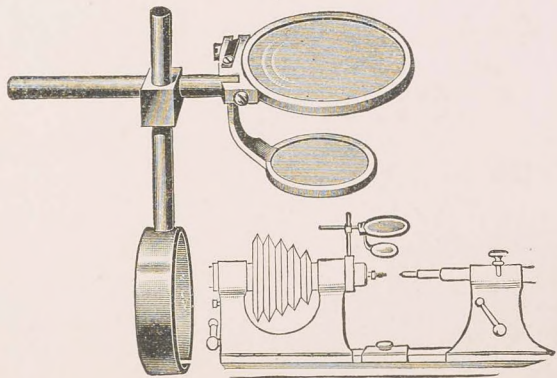
IT IS ALL IN THE POINTS



Combination of Tweezers, No. 1120

Consisting of eight Boley & Leinen superior quality, full tempered nickel-plated tweezers. A welcome companion on your bench. Put up in strong leather case, protecting the points.

Price per set of eight, \$3.25



Lathe Loupe, No. 25

(PATENT APPLIED FOR)

A most useful article, devised by a practical watchmaker. Easily applied to any make lathe. If great power is required, bring into action the two lenses; otherwise swing the small lens out of place.

Rings of two different sizes are furnished with each loupe to meet all requirements. The loupe will enable anyone to inspect the work without bending close to it as with ordinary eye-loupe.

Price, \$1.25 each

For sale by all jobbers in the United States and Canada

**HAMMEL,
RIGLANDER & CO.**

47 & 49 Maiden Lane, NEW YORK

Clement Combined Lathe Attachment

For
Watchmakers
(Patented)

Fitted to any
lathe

Complete as
shown

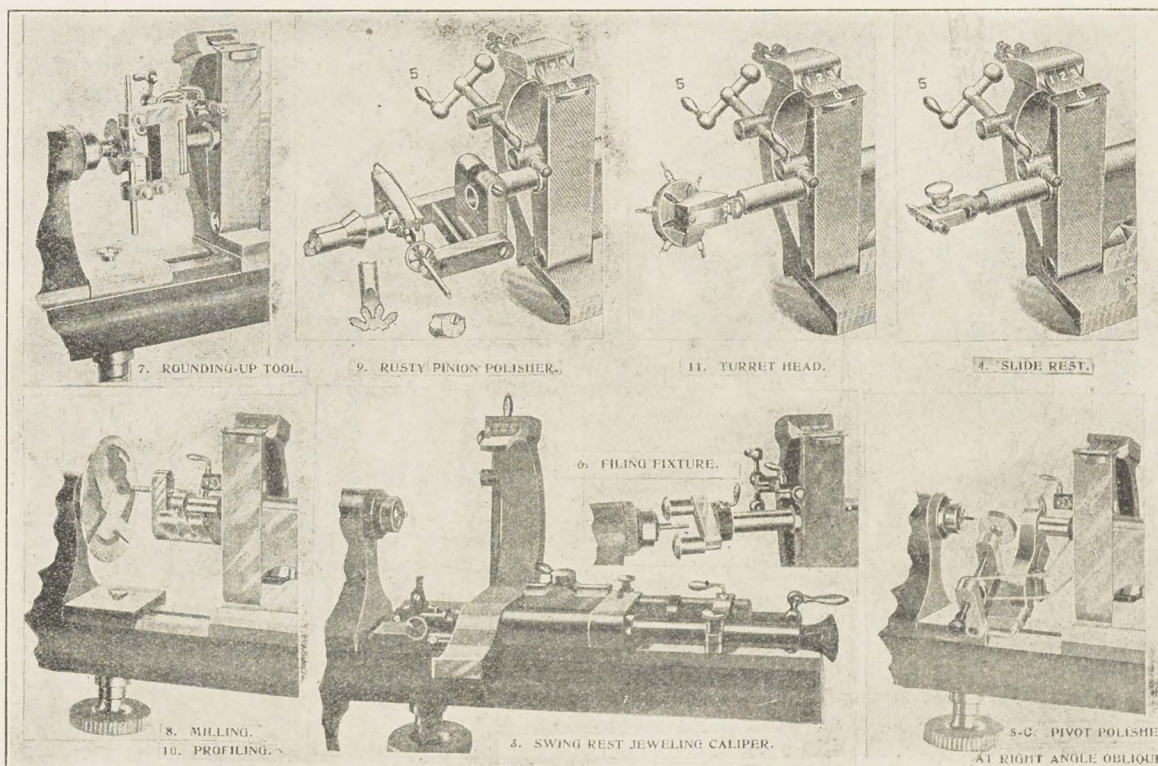
\$40.00
strictly NET

New Catalog
just out

Fully
illustrated

Attachment
sent on
trial free

W. D. CLEMENT,
Waltham, Mass.



Replacing

- 1—Plain Tailstock
- 2—Screw Tailstock
- 3—Swing Rest
- 4—Slide Rest
- 5—Pivot Polisher
- 6—Filing Fixture
- 7—Rounding-up Tool
- 8—Milling Fixture
- 9—Rusty Pinion Polisher
- 10—Profiling Fixture
- 11—Turret Head
- 12—Table Rest

Does

Turning
Facing
Recessing
Shouldering
Boring
Reaming
Milling
Drilling
Tapping
Counterboring
Sawing
Filing
Stoning
Surfacing
Jeweling
Traverse grinding
Polishing
Snailing
Damaskeening
Rounding up
Etc.

NEW CATALOG

Many watchmakers wish our attachment, but their lathe itself is, for some reason, unsatisfactory; they wish it different; to buy, sell or exchange; **What Do You Wish?** We can assist you.

Bulletin 310

NET PRICE=LIST OF

The W. Green Electric Co.'s 1906 Model, Plating Dynamos

(FULLY WARRANTED)

For Gold, Silver, Nickel and Copper Plating, Etc.

Cost to run, 1 to 8c. per day, according to size

Dynamo includes Pulley and Arrangements for Belt Tightening on Dynamo Types 16A to 16D. Complete, ready for use (F. O. B.) New York as follows:

Illustrated Bulletin
and Price-List of
Polishing, Buffing
and Grinding Motors
sent on application

Type of Dynamo	Output in Amperes at 5 Volts	Amount of Gold in Dwts. deposited per hour	Capacity of Silver in Quarts	Capacity of Nickel in Gallons	Capacity of Brass and Copper in Gallons	Lighting Capacity at 5 Volts of 4 C. P. Incandescent Lamps or their equivalent in larger or smaller Lamps	Approximate Speed	Horse Power required to drive Dynamo	Pulley in inches. Grooved or flat	Approximate Shipping Weight in lbs.	Price of Dynamo	Price of Current Regulator (not always necessary)	Chemical white Enamel Iron Plating Tanks Complete with rods and connections
I	6	3	16	25	15	8	2200 to 3200	1-8	Diam. Face	12	\$ 8.50	\$ 1.50	Gallons Price
16A	10	10	100	90	50	15	2000	1-6	2 1 1/2	50	22.00	8.00	4 \$ 6.50
16B	20	18	200	150	90	30	1800	1-5	2 2	70	25.00	9.00	13 8.25
16C	30	30	280	280	150	45	1800	1-4	3 2	100	34.00	10.00	20 12.00
16D	50	50	360	500	350	60	1800	1-2	4 3	150	48.00	13.00	35 21.00
													100 70.00

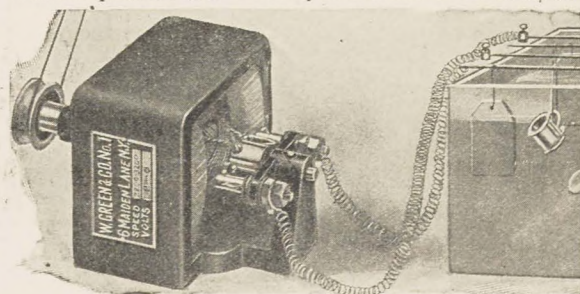
(Arrangement copyrighted, 1906, by The W. Green Electric Co., New York)

☐ The plating and lighting dynamos, Types 16A to 16D are compound wound, have phosphor-bronze bearing, sleeves, **Self-Oiling Bearings** and extra large Commutators and Brushes.

☐ The design and improvement of these Dynamos make a distinct advance in Electric Art, and the most casual inspection of our machines will demonstrate without question that we are years ahead of all competition in perfection of design, workmanship and efficiency.

☐ The Armature, with its bearings and brush rigging, can be quickly and readily removed for examination or repair by loosening the screws on one side of the machine, which is a new and valuable patented feature in the manufacture of Dynamos.

For Price of Power Motors see Bulletin No. 220



Cut showing Dynamo Type I

The W. Green Electric Co.

Manufacturers of

Polishing, Buffing and Power Motors, Dynamos, Dynamotors, Demagnetizers, Electric Chimes, Etc.

6 Maiden Lane, NEW YORK, U.S.A.

(Will remove May 1st to 81 Nassau Street)

For the better handling of the electrical and machinery part of our business, we have organized it into a separate branch under the distinctive name as above.

Yours truly, W. GREEN & CO.

The "Imperial" Mainsprings are all right.

"Nothing better
can be made"

Don't miss this
opportunity,
but try them

545

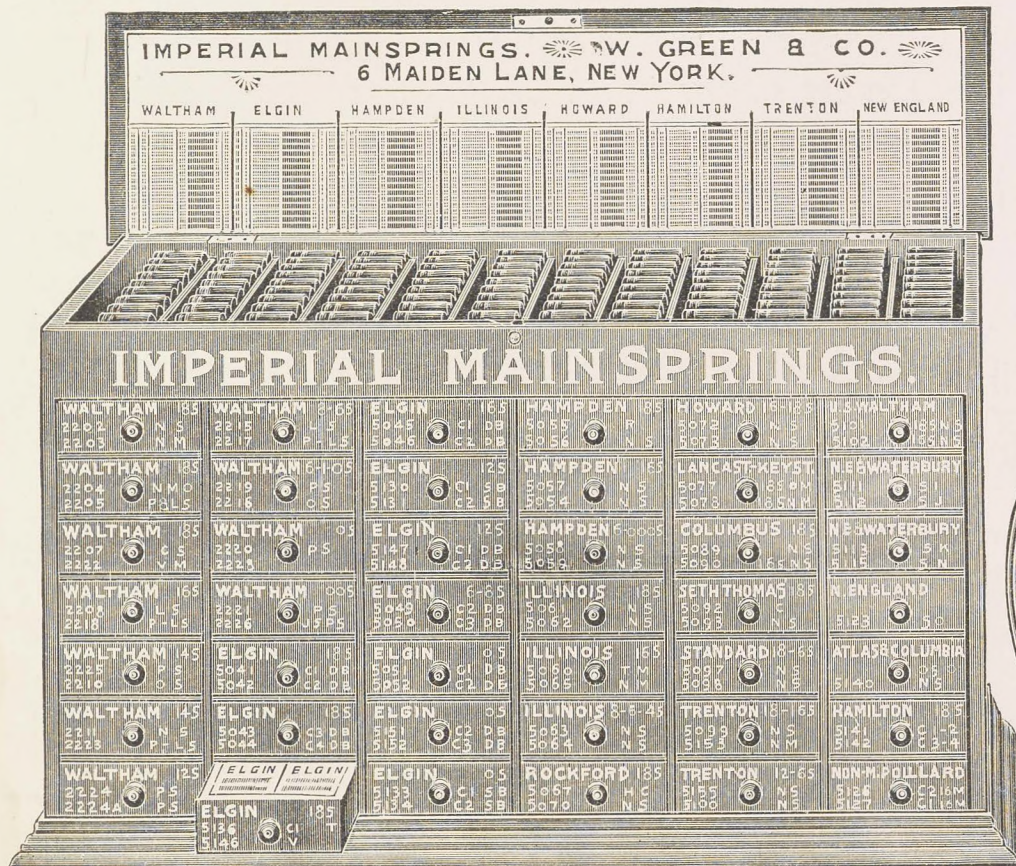
!!!

They are the **BEST**, the **MOST RELIABLE**, have **QUALITY, FINISH, ELASTICITY, TEMPER, STRENGTH** and **DURABILITY**, are **COILED** and **TAGGED**, arranged in the **MOST CONVENIENT** manner, and **"GUARANTEED."**

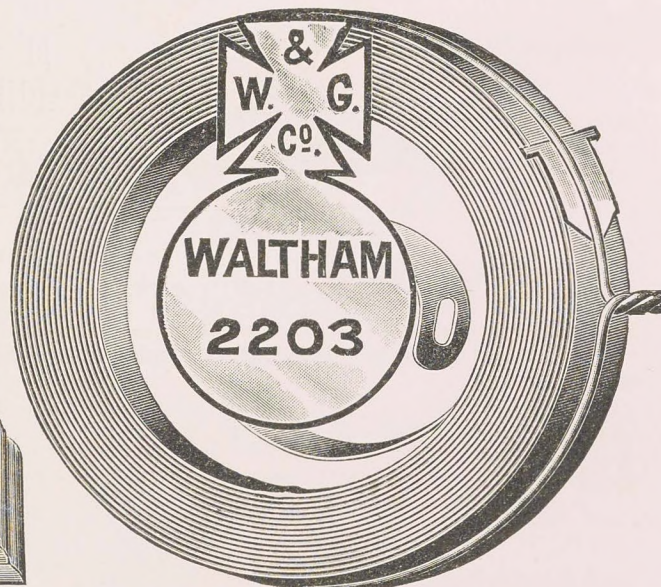
For **\$12.00** net cash you will receive our **20 drawer**, quartered Oak or Cherry Cabinet, complete with labels, bottles and a **full gross** of the celebrated "Imperial" Mainsprings.

For **\$36.00** net cash you will receive our **new 42 drawer** quartered Oak or Cherry Cabinet, complete with labels and **three gross** of the celebrated "Imperial" Mainsprings.

For further particulars, read important notice below



Price, only **\$12.00** Per Gross
1.00 Per Dozen



SPECIAL NOTE.—The Cabinets are far superior than represented by cut. The 20-Drawer Cabinet (capacity of which is 5 gross) is worth \$6.00, and the 42-Drawer Cabinet shown in cut (capacity of which is 15 gross) is worth \$15.00

Enlarged and correct view of Waltham No. 2203 "Imperial" Mainspring, coiled and tagged

ORDERS FOR

**Watch
Materials,
Tools,
Jewelers' and
Engravers'
Supplies**

**FILLED FROM
ANY CATALOGUE
AT LOWEST
MARKET PRICES**

WORTHY OF ATTENTION

The following letter is but a sample of unsolicited testimonials daily received from most reliable sources in every State of the Union:

Utica, N.Y., Sept. 15.
MESSRS. W. GREEN & CO., New York City, N.Y.
Gentlemen:—Please send us the following mainsprings:

1 dozen 5057.	1 dozen 5043.
3 " 2203.	1 " 2220.
2 " 5053.	1 " 2209.
2 " 5046.	1 " 2210.

Be sure and send your "Imperial" mainsprings, as will not accept any others, having had the best possible success with them. We consider them far superior to any other mainsprings in the market, and your service is all we could desire.

Yours very truly, EVANS & SONS.

**N. B.—We carry in stock
175 different styles and sizes of
"Imperial" American
and 450 sizes of
"Imperial" Swiss
Mainsprings**

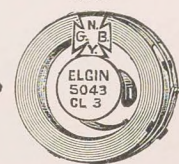
The latest "Imperial" American Mainspring Chart and Guide sent free of charge upon application

Fac-
simile
of

Waltham
Nos. 2203



Elgin
5043



Hampden
5056



Illinois
5061



"IMPERIAL" AMERICAN SPRINGS, Coiled and Tagged.

None genuine unless marked "Imperial," coiled, tagged and bearing our Registered Trade-Mark, as shown in cut.

IMPORTANT NOTICE!

With a first order for one gross of "Imperial" American or Swiss Mainsprings we send **gratis** our 20 Drawer, or with an order for three gross our 42 Drawer improved, handsome, polished, rubbed finish, Quartered Oak or Cherry Mainspring Cabinet, as shown in cut. These cabinets are splendidly made, hard wood, cabinet finished and dove-tailed throughout; are the only cabinets made which properly arrange, systematize and keep in thorough order the many American or Swiss Mainsprings necessary for constant use at the present time, and will be greatly appreciated by all first-class watchmakers. Besides being very useful they are very handsome in appearance. The drawers have fancy knobs, brass trimmed, and the tops arranged in grooves for screw-top bottles for various watch, jobbing and other materials.

The 12 Drawer will hold 5 gross and the 42 Drawer Cabinet 15 gross of "Imperial" American or Swiss Mainsprings. We also include a handsome set of perforated gummed labels, with the name, number and size of springs, to enable the drawers to be numbered as desired. These numbers correspond to an up-to-date directory and guide of all the American Mainsprings made, which directory accompanies the cabinet. The guide shows the correct style, width, strength and number by the genuine Dennison's Standard Gage, and the correct number and names for ordering.

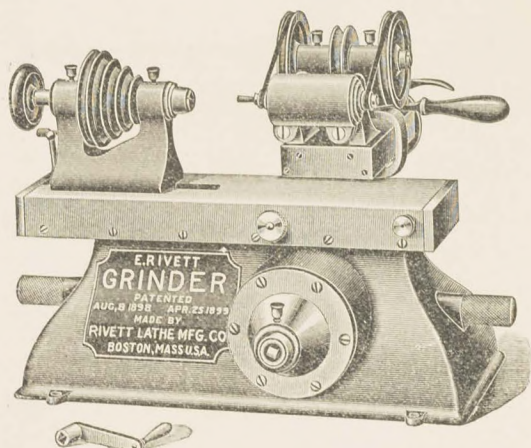
**W. GREEN & CO., 6 Maiden Lane
NEW YORK, U.S.A.**

("We handle everything known to the trade and solicit correspondence")

Importers
Exporters
Jobbers
Manufacturers

Watch Materials, Tools,
Jewelers', Engravers' and
Opticians' Supplies

Rivett Lathes and Grinders

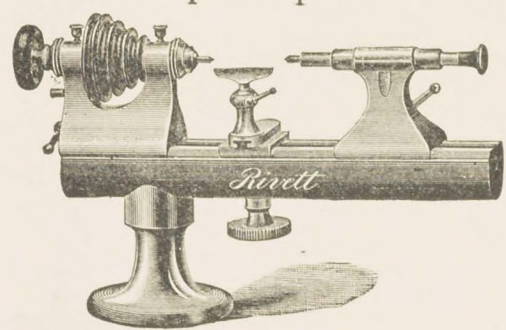


Rivett Lathes and *Chucks* are acknowledged to be the most accurate in the country by our best mechanics, and this accuracy is due in part to our *Grinders*.

The *Rivett Internal Grinders* are famous the world over and we lead the world on Internal Grinders as well as Lathes. One of the finest tool-making factories in the country has twenty-five of our *Grinders* in daily use.



The *Rivett Lathes* and *Chucks* are made as fine as they are by the use of these machines. When you buy *Rivett Tools* you have some examples of the most accurate grinding.



Our principal manufacture is *Lathes* and *Grinders* and we shall increase our output in the spring with a large addition to our factory.

If your jobber doesn't sell our tools, write to us and we will tell you who does.

Just address:

Rivett Lathe, Brighton, Boston, Mass., U.S.A.



SPECIAL OFFER

Balance Jewels C. & F.—Gem Brand, special \$.50 per dozen, net.
Star Brand,85



Balance Staffs—Gem Brand, gray finish, \$.60 per dozen, net.
Star Brand, polished, 1.00 " " " "

FREE—A nice Oak Cabinet with 12 bottles, with an order for 6 dozen Jewels or Staffs, either Gem or Star Brand.

Star American Mainsprings \$.85 per dozen, net.
Star American Mainsprings 10.00 " gross, "

FREE—A fine Oak M.S. Cabinet with 20 drawers, worth \$6.00, with an order for one gross mainsprings.

Stevens Optical Goods—We carry a complete line of Stevens 12 K. Gold Filled Frames and Rimless Mountings at right prices.

H. B. Peters & Co., ¹⁷⁹ Broadway, New York



OUR ELECTRO-PLATING SALTS

when dissolved in water make a Plating solution at once ready for work and **always correct shades.**

Know that we are the originators and manufacturers of

Dark Green Gold Salts (Antique)
and other Shades of Green

Likewise the

Rose and Orange Rose Gold Salts

used for single and double gilding, and of a good many other shades now on the market.

Our Roman Gold Salts produce an almost bright deposit, requiring little or no scratch brushing. French Gray, 14 or 18 K. Gold, Old English Gold, Silver Ebonizer, in fact any shade wanted can be had of us.

Write for circular.

The AUTOMATIC ELECTRO-PLATING MACHINES

Specially designed for the small manufacturing and the retail Jeweler, will be of interest to them. Send for Pamphlet.

U. S. ELECTRO-CHEMICAL CO.

H. HIRSCHBACH, Prop. 80 Elm Street, New York



CANDO

Silver Polish

IS THE BEST

for Jewelers to handle—it is a quick seller and positively superior to any known polish on the market. The patent cap used on jar for **CANDO** is made to perfection.

We call special attention to the importance of a package for Silver Polish that can be **RESEALED** after it is once opened.

Samples sent when requested. Correspondence solicited

PAUL MFG. CO.

Boston, Mass.

Presentation Jewels

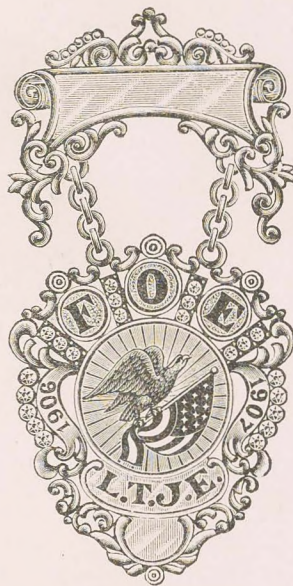
Of all Orders Made to Order
Special Designs Cheerfully Submitted
Prices Extremely Moderate

TRADE-MARK

Stamp our New Mark
It is a guarantee



on your memory
of Quality



You can secure that presentation order by referring to our new 1906 catalogue, which illustrates dozens of handsome designs, with prices ranging from the cheapest to the best. The trade will find originality in our **Presentation Jewels**, as well as fine quality, extra good weight and reasonable prices. Our designing department is at your service and we only await the pleasure of serving you. Do us the favor to try us on one of your orders this year.

THE GUSTAVE FOX CO.

14-16 E. Fourth Street

Cincinnati, Ohio

New K. & D. Roller and Hand Remover, with parallel jaws

This tool is exceptionally well made and finished, and has all of the modern requirements in its make-up. It will remove successfully either double or single rollers of any size; the only tool of its kind with parallel adjustable jaws. Roller rests flat on inside of jaws which obviates danger of breaking pivots. It has four plungers, two for removing watch hands; plungers are fitted with taper (no screws) and are easily and quickly changed with pin, as illustrated. Recess in end of handle for extra plungers. The jaws open and close by turning knurled disk either way.



LATEST AND BEST

No. 150

FOR SALE BY ALL JOBBERS



KENDRICK & DAVIS, Lebanon, N. H.

L. LELONG & BROTHER

Gold and Silver REFINERS, ASSAYERS and
SWEET SMELTERS

BULLION SOLICITED

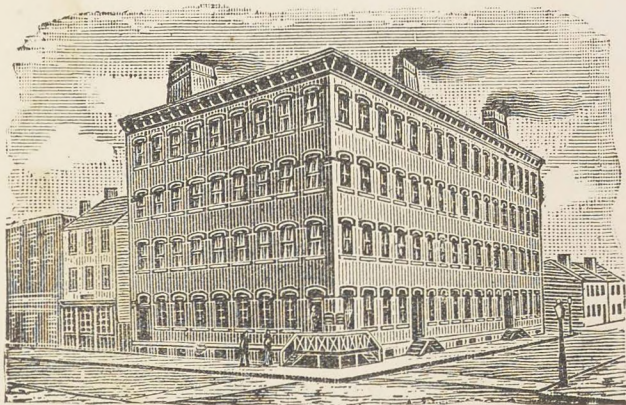
SMELTING FOR
THE TRADE

SWEETINGS
OUR SPECIALTY

Prompt attention given to
Old Gold and Silver forwarded to us
by mail or express

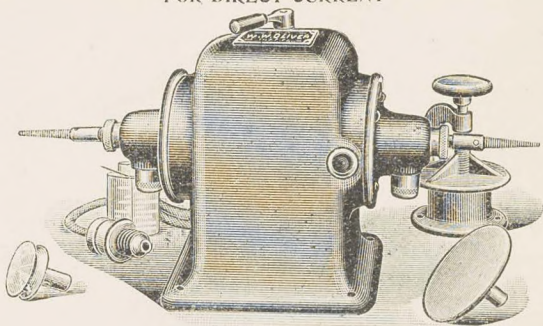
Southwest Corner
Halsey and Marshall Sts.

Newark, N. J.



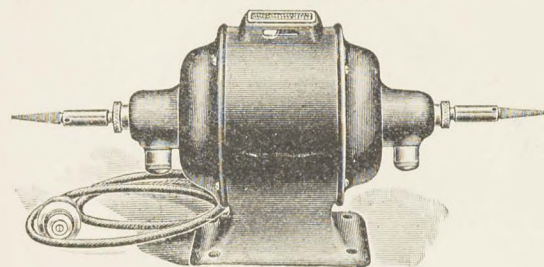
The Jewelers' Motor Polishing Heads

FOR DIRECT CURRENT



These Heads are the result of many months' study and thought. They embody all the essential features necessary for strictly high-grade, efficient and durable machines. With each machine can be furnished

FOR ALTERNATING CURRENT



2 Brush Chucks
1 Pulley Chuck for connection with a dynamo
1 Disk Chuck, mounted with carborundum cloth

Assorted carborundum cloth on paper disks
1 Screw Press for use in mounting disks
1 Can of Cement

READ WHAT ONE OF THE MANY USERS OF THESE MOTORS SAY ABOUT THEM:

HAGER & HETSCH
Manufacturers of Fine Jewelry and Diamond Setters

W. W. OLIVER MFG. CO., Buffalo, N. Y.

Gentlemen:—Your letter of the 5th inst. received. Yes, we have been using two (2) of your 1-5 horse-power Motors for the past nine months, and will say that we consider them perfect. We had some little trouble with them at first, but will say frankly that said trouble was due mainly through our inexperience with Motors. Having become accustomed to them, we certainly would not be without them, as we do not think we could possibly find any Motor more suitable for our line of business.

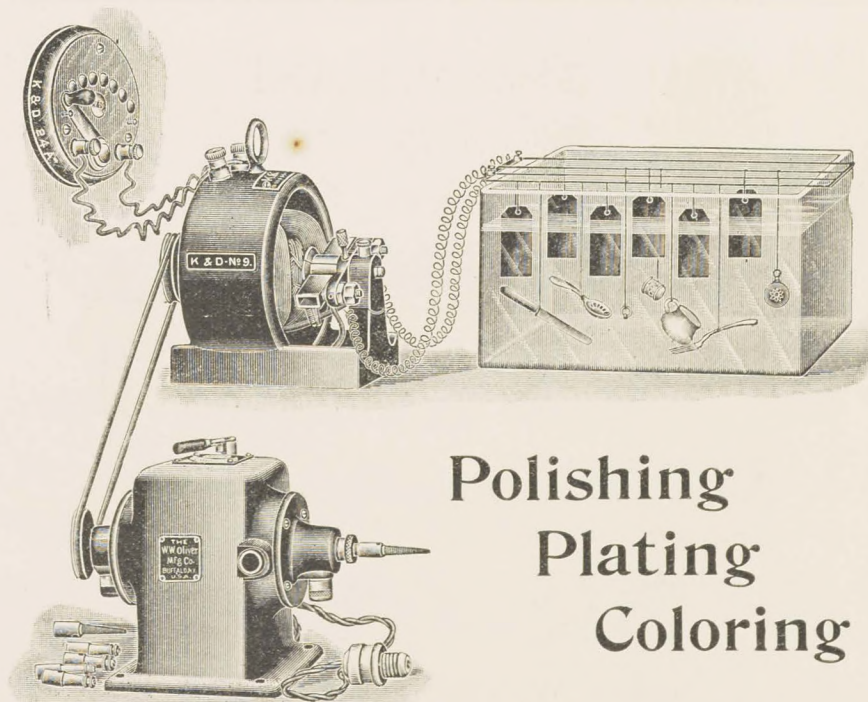
Very respectfully,

Louisville, Ky., Jan. 9, 1906.

HAGER & HETSCH,

Our No. 5 Bulletin (just issued) will give a full description as to dimensions, prices, etc. Do not fail to send for it.

W. W. Oliver Manufacturing Co., Manufacturers
1490-1492 Niagara St., BUFFALO, N.Y., U.S.A.



Polishing
Plating
Coloring

The above illustration shows the No. 9 Dynamo connected with a Type "A" 1-5 H. P. Electric Polishing Motor made by the W. W. OLIVER MFG. CO., Buffalo, N. Y. (Descriptive price circulars on application.)

The Rheostat (illustrated in the upper left-hand corner) is used in connection with the No. 9 Dynamo to regulate the current that any required amount may be allowed to flow through the tank. (Price, \$1.00.)

Prompt attention given to applications for price circulars and other information regarding Electric Polishing Motors, No. 9 Dynamo, K. & D. Rheostat, Plating Tanks, etc. Address,

KENDRICK & DAVIS, Lebanon, N. H.

W. W. OLIVER MFG. CO., Buffalo, N. Y. OR

N^o. 9 DYNAMO PRICE \$8.00

Manufactured by

KENDRICK & DAVIS, Lebanon, N. H.

A shunt-wound and **very powerful** little Dynamo which can be operated from any convenient source of power. As a **Plating Dynamo** it has every advantage over primary batteries; this arrangement does away with the renewal of elements and solution, besides having the strength to operate a 5-gallon bath successfully.

Speed, 2200 R. P. M. Volts, 2. Size, 6 x 4 $\frac{3}{4}$ x 6. Weight, 9 pounds.

Its **design** and construction embody the best practice common to the larger machines in general use.

The Field is of the ring type cast solid with the frame.

The Coils are form wound and taped, and are safe from mechanical injury or breakdown.

The Armature is laminated and slot wound, which prevents its heating.

The Commutator is of hard copper and sparkless.

The Brush Holders are of new design, and add greatly to the efficiency of the machine.

The Brush Holder Yoke is adjustable; an advantage in regulating and operating.

The Bearings are of hard bronze, nicely fitted.

Only the Best Material is used in its construction; the Dynamo being finished in black enamel and furnished with 1 $\frac{1}{2}$ " grooved or flat pulley as desired.

At Speed of 2200 it generates 6 amperes and 2 volts, an output of 18 watts.

SUSSFELD, LORSCH & CO., WHOLESALE AGENTS, 37 MAIDEN LANE NEW YORK



Balance Jewels
Set C. & F. for all American Watches. Highly
Guaranteed true and accurate sizes. Highly
Polished. Price, \$1.25 doz.; \$15.00 gross.
Ruby and Sapphire. Price, \$1.25 doz.; 9.00 gross.
Garnet

New and advanced methods employed in our
own factory has rendered possible and practical
the exclusive use of so-called "IMITATION"
Jewels and Staffs.

Used in the Largest Repair Establishments.



Balance Staffs
For all American Watches. Accurate
Best selected and tempered steel. Accurate
sizes. Guaranteed to fit.
Polished entire, price, \$1.25 doz.; \$15.00 gross.
Gray finish 1.00 doz.; 12.00 gross.

H. S. Meiskey & Co.
WHOLESALE JEWELERS.

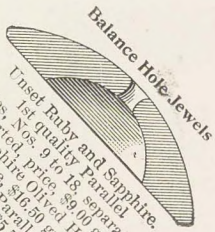
JOBBER & IMPORTERS.

WATCHMAKERS AND JEWELERS SUPPLIES.

Lancaster, Pa.

Write us for
information regarding our New Balance Jewel
and Staff Assortments.

IT WILL INTEREST YOU.



Balance Hole Jewels
Inset Ruby and Sapphire.
Holes Nos. 9 to 18, separate or
assorted, price, \$8.00 gross.
Sapphire Olivet Holes,
price, \$16.50 gross.
Garnet Parallel Holes,
price, \$9.00 gross.

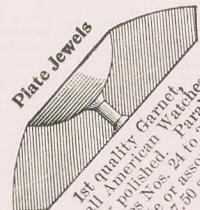
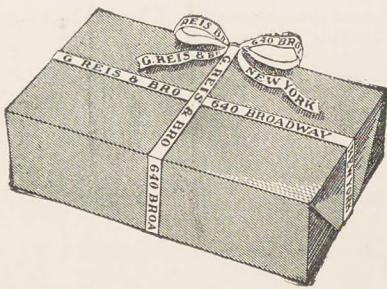


Plate Jewels
Set quality Garnet
for all American Watches.
Highly polished. Parallel
Holes Nos. 24 to 36,
separate or assorted,
price, \$7.50 gross.

TALK

of the right kind helps
ANY BUSINESS



**REIS'
ADVERTISING TAPE**

TALKS RIGHT TO THE POINT.
COMMON TWINE costs money and brings
no returns.

REIS' ADVERTISING TAPE costs a little
more, but brings *Trade to your Store*.
No novelty, at many times the cost, can
show the same results. In colors and
widths to suit. Write for Samples and Prices

**G. REIS & BRO., 640 BROADWAY
NEW YORK**



Class Pins, Col-
lege Emblems,
Seals, Flag Pins,
Charms, Fobs,
Hat Pins, etc.

We have stock dies of
nearly everything in
Flags and Seals.

—
WILL MAKE ANY
DESIGN OR EMBLEM
TO ORDER
—



F. H. NOBLE & CO.

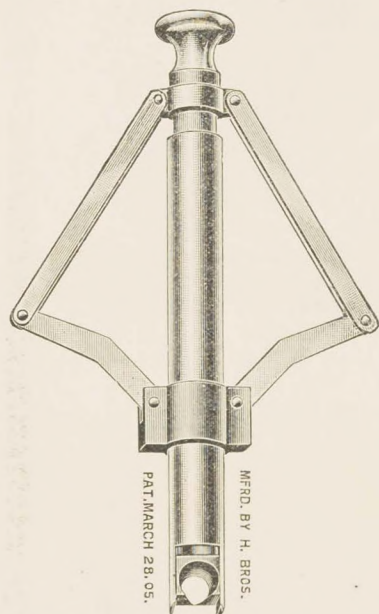
SALESROOMS
42 Madison Street, Chicago
51-53 Maiden Lane, New York

59th and Wallace Streets

CHICAGO

HARDINGE BROS., 1036 Lincoln Ave. Chicago, Ill.

Reduced in Price



ELLIS HAND REMOVER

We are now prepared to fill orders for this most convenient and practical tool. You will see by the illustration that this tool presses on the dial a good distance from the center hole and remains still, while the part that draws the hands off pulls vertically and steadily, thus never cracking the dial, as the contact is constantly changing with the pressure.

Price, nicely nickel-plated, \$1.00

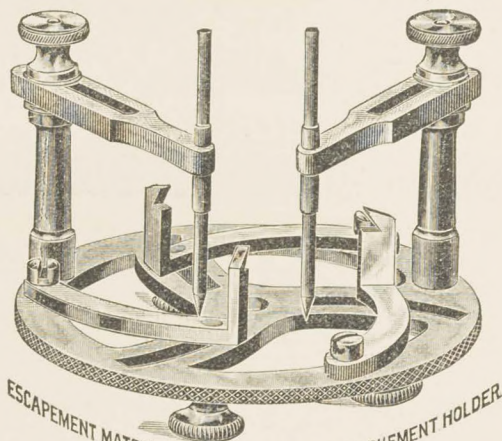


HARDINGE BALANCE CHUCK

We have reduced the price of this chuck to **\$3.75** from **\$5.00**. Do not be misled by poor substitutes of this article. Every one is properly made and is true. No other style is so convenient as this. We have sold this chuck for the past ten years, giving universal satisfaction, and it is no experiment. Made for all standard watchmakers' lathes.



WIRE CHUCKS
60c. Each

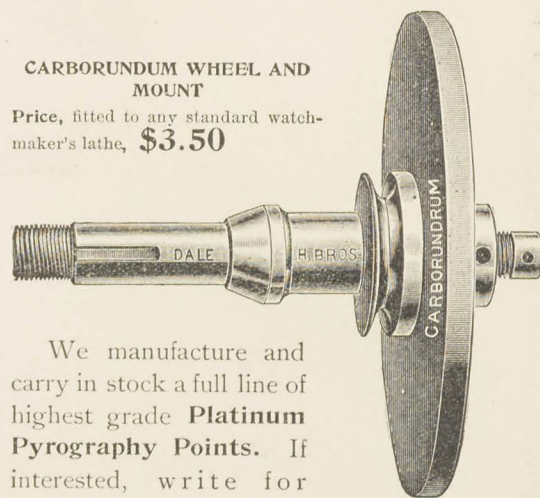


ESCAPEMENT MATCHING TOOL. DEPTHING TOOL & MOVEMENT HOLDER.

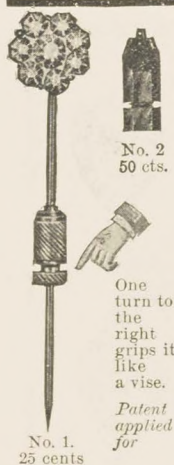
Price, Two Arm \$2.50
Price, Three Arm 3.25

CARBORUNDUM WHEEL AND MOUNT

Price, fitted to any standard watchmaker's lathe, **\$3.50**



We manufacture and carry in stock a full line of highest grade **Platinum Pyrography Points**. If interested, write for particulars.



No. 1.
25 cents

No. 2
50 cts.

"CLINCH"

Hoffman's Safety Catch for Scarf Pins

Simplest and Most Practical Scarf Pin Fastener on the Market

IT WILL NOT MAR THE PIN

Fits any size pin. Has a grip like a vise. No broken finger nails. Nothing to get out of order.

ORDER NOW

For sale by all leading jobbers and material houses, or

THE HOFFMAN NOVELTY CO.

Box 314, ALBANY, N. Y.

PRICES TO THE TRADE
No. 1. Gold plated, \$1.50 doz.
No. 2. 14 K. gold plate, 2.25 doz.

The wholesale jobbing trade supplied by
Sussfeld, Lorsch & Co., 37 Maiden Lane, New York

ESTABLISHED
1871

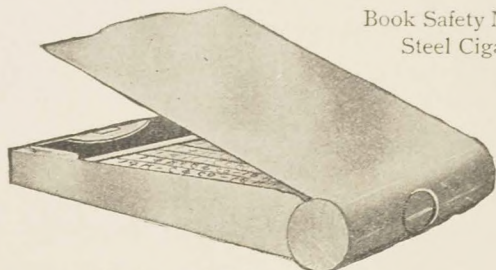
Factory and Office: Newark, N. J.

INCORPORATED
1900

CARRINGTON & CO.

Patent Pocket Match Box

14 K.
ONLY



Book Safety Matches with
Steel Cigar Cutter
Patented

14

18

Sales Agent: 7 Maiden Lane, New York

JEWELERS' SAWS

Joh. Zeuner, of St. Goar, Germany, is famous
as the maker of

THE BEST SAWS

and has appointed us his **SOLE AGENTS** for the
UNITED STATES AND CANADA

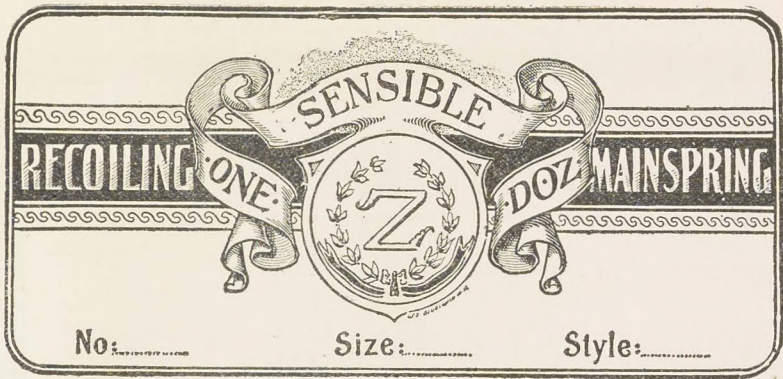
Ask your Jobber for **ZEUNER SAWS**
if you want **THE BEST**

or write to us

When in need of **Fine Files**, kindly remember
"American Swiss"—our own make

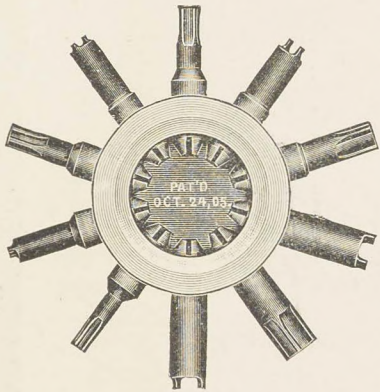
E. P. REICHHELM & Co.

23 John Street, New York



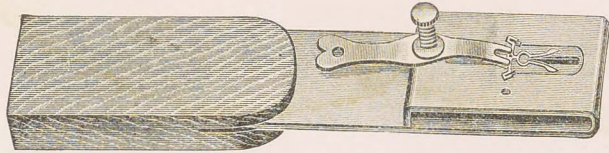
Try the Sensible Recoiling Mainsprings

The best in the market. Expert watchmakers pronounce them to be perfect in every respect. Order from your jobber. If he is unable to supply you, write us and we will inform you who can. **\$1.00 Dozen; \$12.00 Gross.**



Improved 10-Prong Patent Sleeve Wrench

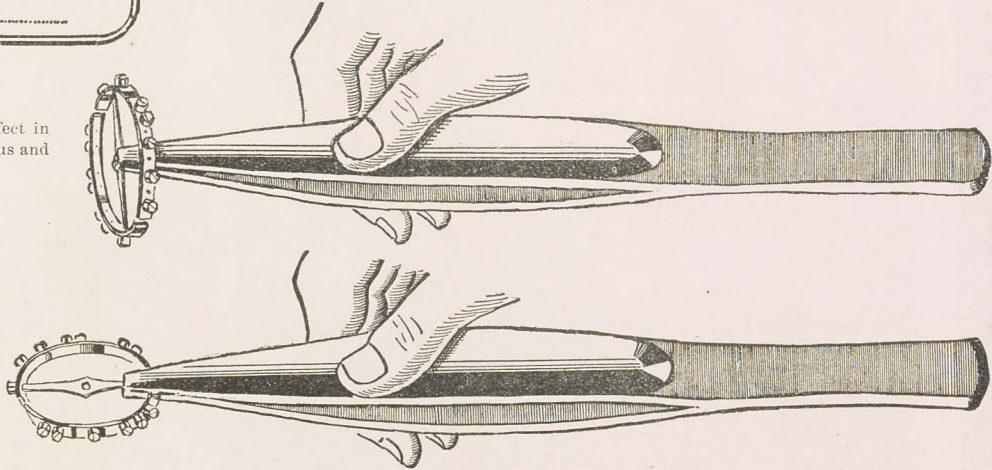
We are sole agents for this Wrench. Beware of imitations. None genuine unless bearing date of patent shown in illustration. This is the only accurate and practical tool of its kind on the market.



The Simplex Pallet Adjusting Tool

The most practical device ever invented for setting pallet stones or correcting defects in the lever escapement. As its name implies, the operation of this tool is simplicity itself. By means of an oblong slot, the spring clamp is adjusted in an instant to hold any sized pallet, either straight line or rectangular. This clamp is movable in every direction. The tool is easily heated, and can be handled without difficulty while warm. The pallets can be placed in position or removed in an instant.

Price, \$1.00



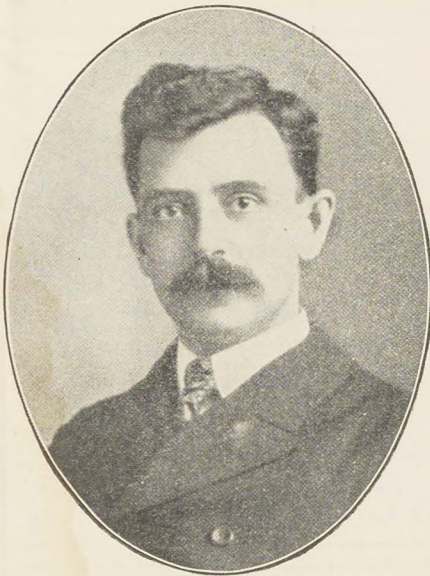
Perfection Balance Truing Tweezer

Pat. July 26, 1904

The only Balance Truing Tweezer on the market that will hold arm of balance without touching staff or rim—as per illustration.

It is also useful for holding Hands, Pivots, etc. Made of heavy steel, nickel finish, concave side to prevent slipping. **Price, 50 cents.**

HENRY ZIMMERN & CO., Inc., SOLE AGENTS, 77 John Street, NEW YORK



Rees Engraving School

Strictly high class
Established 15 years

Write for our booklet

F. H. REES
Proprietor and Instructor
Steele Memorial Building
ELMIRA, N. Y.

"MODERN LETTER ENGRAVING," by mail, \$1.50

Foot-Power Lathes

High-grade tools { Correct in principle.
Elegant in design.
Superior in construction.

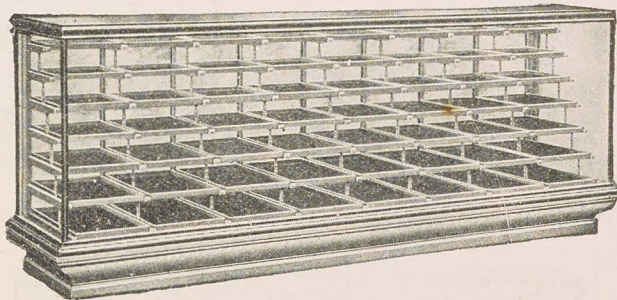
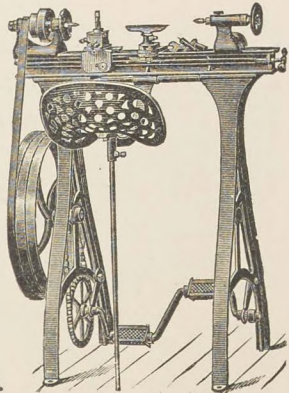
The Best Foot-Power Lathes Made

This cut represents our No. 4 Lathe, which is admirably adapted for the heavier work of watchmakers and jewelers. *Send for our Catalogue.*

We also make a line of Screw-Cutting Lathes for Bicycle Repairing

W. F. & John Barnes Co.

660 Ruby Street, Rockford, Ill.



IT IS THE FASHION

now, when people think more of quality than mere showiness and "made-to-sell" equipment, for merchants to buy show cases that are honest through and through. That's why the

Silent Salesman
TRADE MARK

has made such tremendous gains. It's a show case that sells goods, and contains more honest material, first-class workmanship and actual "Make-sales" qualities than any other case on the market.

The PHILLIPS' QUALITY—that's what causes the great demand and keeps them good as new year after year.

Want a Catalogue?

John Phillips & Co., LTD.
Detroit, Mich.



Selection Packages Sent Upon Request

WE HAVE MOVED

to our new location, S. E. Corner

Baltimore St. & Hopkins Place

and we beg to announce that in addition to our usual complete stock of **Waltham** and **Elgin Watches**, we have added that of the well-known **E. Howard** make in all grades.

Write for a descriptive price-list.

J. Engel & Co.
JEWELRY FOR THE JEWELER

Watches, Diamonds, Jewelry

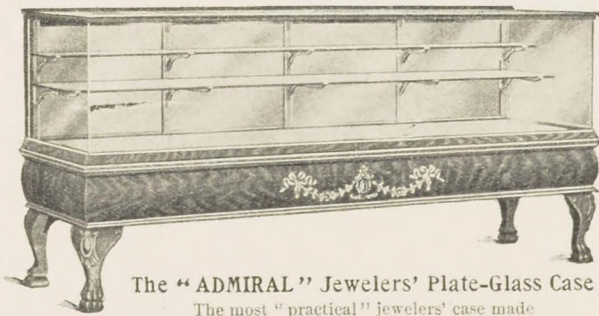
BALTIMORE, MD.



WINTER FIXTURES



The STANDARD for QUALITY and STYLE



The "ADMIRAL" Jewelers' Plate-Glass Case
The most "practical" jewelers' case made

The Easter Number of The Keystone illustrates two handsome jewelry stores fitted with our "ADMIRAL" Cases. See pages 459 and 461. The plans and outfits shown on these pages came from "WINTER," the High-Grade Fixture Makers.

Send for our catalogue entitled "Winter's Encyclopedia of Modern Store Fixtures," a 310-page book full of new designs. Sent postpaid on receipt 25c. postage.

THE LINE OF QUALITY. Not how cheap, not how much, but how good. At prices that are right. Ask our customers. Anything from a store stool to the most complete outfit.



M. WINTER LUMBER CO.

SHEBOYGAN, WIS.

Established 1865

The High-Grade Fixture Makers



THE PEACE OF MIND

enjoyed by the owner of a

PROTECTOGRAPH

is worth many times its cost.

The Only Check Protector that the U. S. Government would adopt is the safest one for you to use.

Occupies only six inches of space, and weighs eight pounds. Hundreds of sharp little teeth bite a line like this clean through each check it stamps, any amount.

There are thousands of Protectographs in daily use by the leading financial and industrial concerns of the world, because careful test has proved all other systems of check protection do not make alteration impossible.

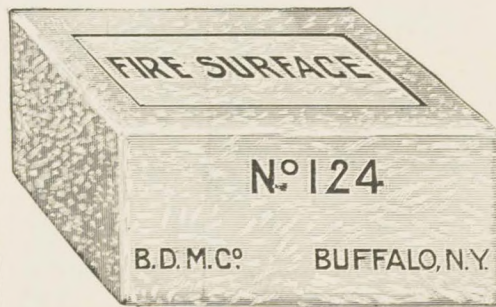
The Price is \$30.00

It will pay you to write to-day for our booklet, which contains many valuable lessons all should know on the wily ways of the forger, and incidentally proves conclusively why the PROTECTOGRAPH is the only machine that absolutely puts this gent out of business for good, so far as its satisfied users are concerned.

G. W. Todd & Co. 37 Exchange Street, Rochester, N. Y., U.S.A.

Can't be raised to Ten Hundred NOT OVER TEN DOLLARS \$10\$ They can't make it mean Ten Thousand

Cleaner and Neater than Charcoal



B.D.M.C.

BUFFALO, N.Y.

Size 3" x 2 1/4" x 1" Thick

For FINE SOLDERING No. 124, Prepared Magnesium Soldering Block is superior, because it reflects heat better than the ordinary soldering block, and is loose enough to admit of work being pinned to it. Very popular.

Price, 15 cents

Postage Paid

BUFFALO DENTAL MANUFACTURING CO., Buffalo, N. Y., U.S.A.

Ask for Catalogue BK of Soldering Appliances, Gas Furnaces, etc.

The MERITAS MAINSPRING

differs from all others in the fact that every point is carefully gaged, hand rubbed and hand finished to an exactness.

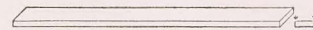
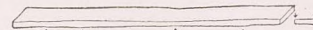


Illustration shows enlarged view of a Meritas Mainspring perfectly hand rubbed. End view shows it perfectly flat.



An exaggerated view of a Mainspring before hand finishing. The end view shows how the edges may vary in thickness.

If the thickness of a Mainspring is precisely the same throughout its entire length, like two parallel lines (see illustration), it must be far more even and uniform in its pulling power than a Spring which is cut from the sheet right from the roll, and if carefully tested would appear something like lower illustration. The thinner parts of the Spring must necessarily be weaker than the thicker parts. No steel roll can roll out a piece of steel exactly and precisely the same thickness at all points. This is an acknowledged and proven fact. Imagine a Mainspring unwinding in the barrel as it unwinds at a thinner part, the force is at once reduced, and as the thicker part bears into play the force may be almost doubled. Much of the trouble in failure to obtain exact rating may be traced to the Mainspring.

It is therefore necessary to gage and hand rub the MERITAS Mainspring, making it precisely uniform in thickness and finish. For excellency of material, finish and temper the MERITAS Mainspring is unequalled. USE MERITAS, AND THE FIRST STEP TOWARD RESULTS IN FINE RATING IS SOLVED AND SETTLED.

For All American Watches, \$1.25 per dozen ;
\$14.00 per gross

Less 6% for cash



Illustration shows the Swiss workman carefully gaging and hand finishing the Meritas Mainspring



"MERITAS" 60-Drawer Mainspring Cabinet With One Gross Mainsprings, \$15.00 Net

Covered with leatherette paper, frame of wood, boxes or drawers of strawboard.
Size, 18½ x 13½ x 4 inches

If Cabinet is desired in Solid Oak, add \$1.50 net to above

OUR SOLID OAK CABINETS

are nicely finished. Drawers have black knob pulls. Every piece is properly fitted, and the entire case is made of well-seasoned wood.

Price of Oak Cabinet only, \$3.50 net

Gives you a place for every popular American mainspring. Has the illustration of every mainspring, the size, description, width and strength of each respective kind marked right on the front of every box.

A Modern Improvement. Something You Have Always Needed

NOTICE—The sale and manufacture of Mainspring Cabinets marked as above with the width and strength of each mainspring is exclusively our own and original idea, and if advice proves favorable, we mean to protect ourselves against all infringements.



Has Solid
10 K. Bridge

THE MERITAS stamped in every bridge, has a 10 K. heavy solid gold nose-piece, the stiffest and best of all frames. You can safely guarantee the MERITAS until it is entirely worn out. Why pay more when you have every virtue backed by a guarantee of the Bay State Optical Co.?

THE CABLE TEMPLE OF THE MERITAS PRIZE WINNER FRAME

Has three inches of B. S. O. Filled Stock from the joint to the middle.

Has three inches of 10 K. plump Solid Gold stock from the middle to the end, where it rubs on back of head and ears, where perspiration oozes through and discolors anything but gold.

If we Could but Convey to You

the full import of our offer in MERITAS FRAMES they would head your list unquestioned as the best value in the Optical World

"THE MERITAS" The safe brand for Opticians and Watchmakers

Sizes in Stock—1 Eye, 0 Eye and 00 Eye

No. 1074.	The Meritas 10 K. nose-piece riding bow, per dozen	\$ 9.75
No. 2195.	The " 10 K. " with solid gold 10 K. Temples	16.75
No. 1044.	The " 10 K. " cable or spiral wire riding bow, per dozen	12.50
No. 1064.	The " 10 K. " straight, per dozen	10.50

The Rimless Meritas 10 K. Nose-Piece with Meritas "00" Eye, Periscopic Convex Lenses, any Focus

No. 1388.	Rimless Meritas, with riding bows, per dozen	\$11.75
No. 1188.	Rimless " with cable or spiral wire riding bows, per dozen	15.50

THE "MERITAS" PRIZE WINNER

No. 1065. Meritas Prize Winner. With 10 K. solid gold nose-piece, solid 10 K. gold cable temples half way from the ends, balance B. S. O. gold filled. \$14.75
No. 1065. The Meritas Prize Winner is the greatest value and highest optical achievement at the smallest possible price. The wearing quality surpasses even the solid gold. The parts which are exposed to wear being 10 K. plump solid gold, there is no base metal beneath to show or wear through. The No. 1065 Meritas will outlast a solid gold frame and give better satisfaction every time.

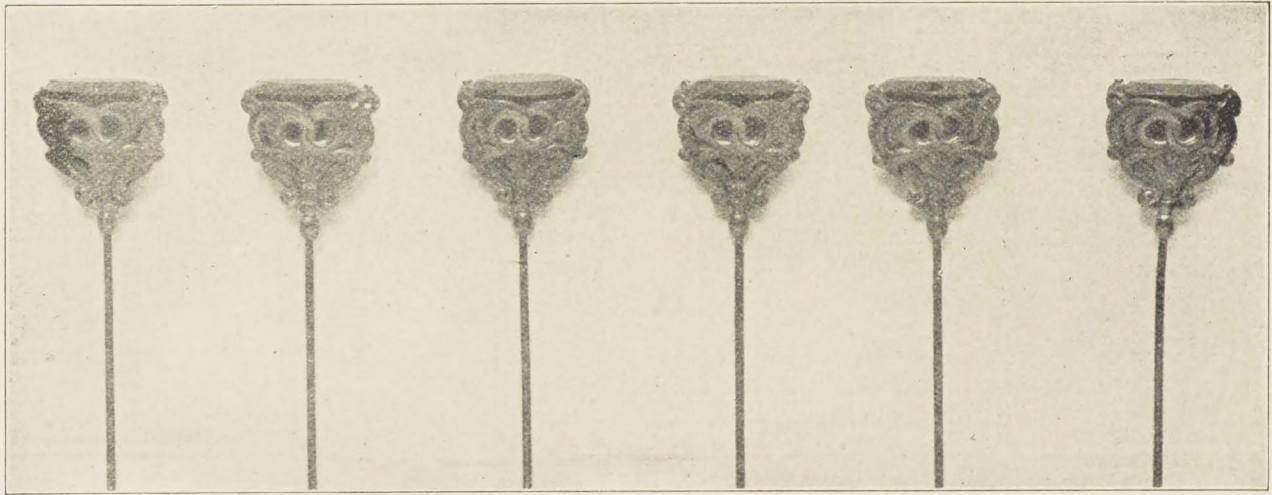
Less 6% for cash

HENRY PAULSON & CO. 156 Wabash Avenue
CHICAGO

"THIS CAN'T BE BEAT"

We offer for a limited time our regular \$4.50 line of Roll-Plate Fancy Stone Top Hat Pins, at

\$2.00 Per Dozen, Net Cash

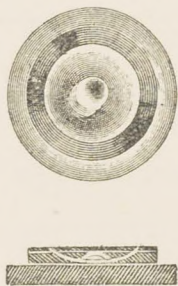


Send in your order at once; the quantity is limited

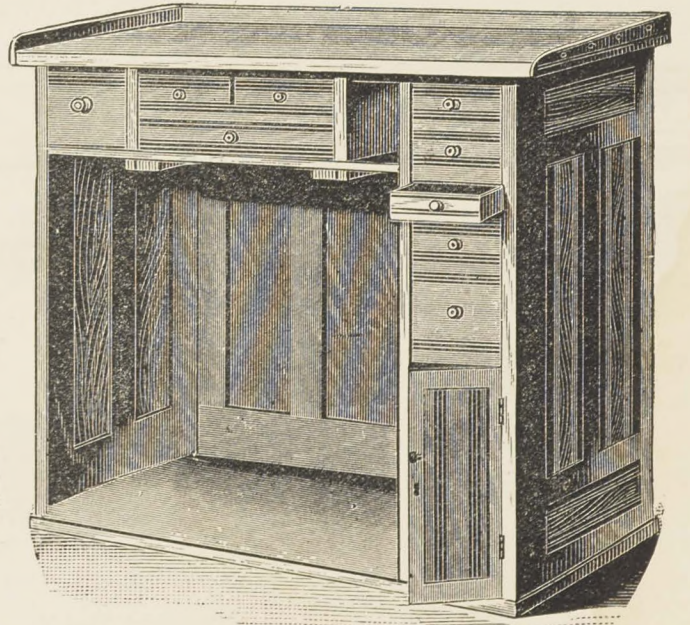
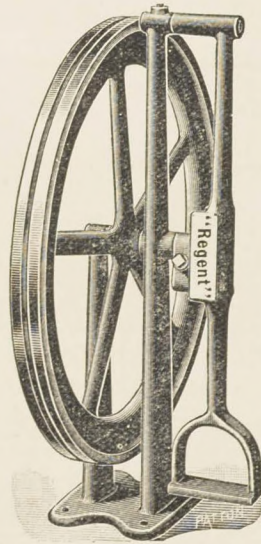
MAIN SPRINGS



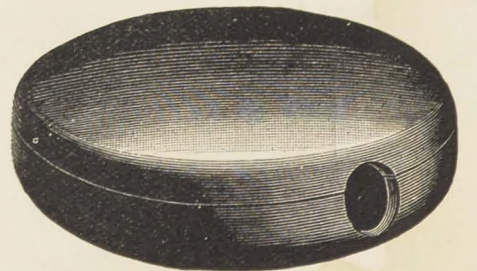
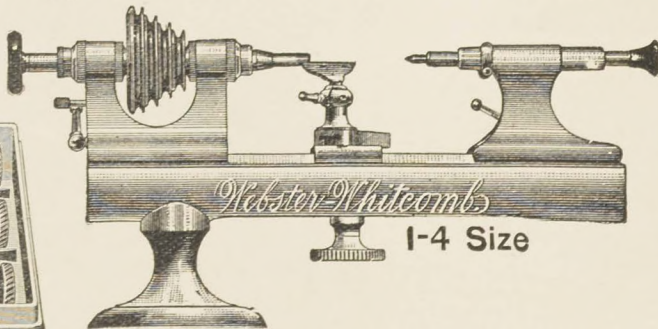
BALANCE JEWELS



BALANCE STAFFS



Webster-Whitcomb Lathe and 2 Chucks	\$29.00
Regent Foot-Wheel, improved	5.50
Solid Oak Bench	11.50
Set of 5 Nickel-Plated Screw Drivers40
Ajax Insulator, dozen	2.15
Regent Mainsprings	\$1.00 dozen; 10 50 per gross
" Balance Staffs75 " 7.50 " "
" Balance Jewels75 " 7.50 " "



CROSS & BEGUELIN,
(A CORPORATION)

Importers, Exporters and Manufacturers
Watches, Diamonds, Jewelry
Silver-Plated Ware, Etc.

17 Maiden Lane, New York



Easter Lily Plants

All prices from 25 cents up.
Ask for our illustrated catalogue.



No. 2022. Easter Ring for Show Windows

Of Wistarias in light lavender color, Lilies and Smilax, Butterfly in center.
A magnificent piece for the window, each, \$3.50
Or single Butterflies, 12-inch spread, " .50
" " " 19 " " " .75
" " " 26 " " " 1.00



No. 2517. Apple Spray . . . per doz., \$3.00
No. 2518. Apple Spray, in full bloom,
30 inches long . . . each, .75
No. 2519. Apple Spray, in full bloom,
48 inches long . . . each, 1.75
No. 2520. Apple Spray, in full bloom,
60 inches long . . . each, 3.50
Apple Blossoms, per gross, 70 cents; in
clusters of 5 flowers, 2 leaves and 2 apple
blossom buds, per gross \$4.20.

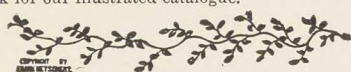
Easter 1906

Our Decorative
Novelties will
push your
business ahead
of all the other
establishments

Frank Netschert Company

34 Barclay St.
NEW YORK

Ask for our New
Illustrated Catalogue
No. 200—FULL OF
NOVELTIES



No. 2994. Smilax

15 piquets to a yard, each piquet contain-
ing 4 leaves. Per dozen yards, 55 cents;
per gross, \$5.50.



No. 2991. Wild Rose

Garland with flowers; 18 green Wild Rose
leaves; 6 flowers in each yard. Each yard,
25 cents; per dozen yards, \$2.50.



No. 2981. Clematis Vine

3 Clematis Flowers and 15 Clematis Leaves.
Per dozen yards, \$1.70.



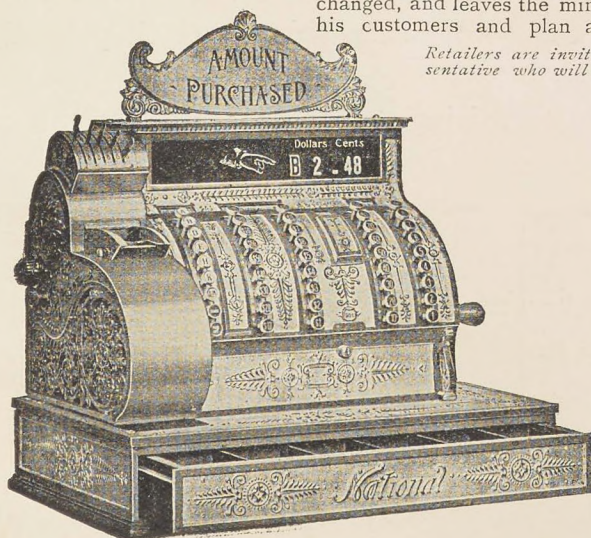
No. 2982. 18 natural green Ivy Leaves in
each yard. Per dozen yards, 90 cents; per
gross yards, \$9.00.

A System to Increase Trade

Put aside detail work when the same result may be obtained
in less time and at less cost by automatic machinery. The
hustling retailer of today must have time to look after the wants
of his customers and keep his stock up-to-date to attract trade.

A National Cash Register handles accurately, cash sales, credit
sales, money received on account, money paid out and money
changed, and leaves the mind of the retailer free to interest
his customers and plan a larger business for the future.

Retailers are invited to send for our repre-
sentative who will explain N. C. R. System.



Tear off here and mail to us today

N. C. R. Co.
Dayton Ohio

Please explain to me what kind of
a register is best suited for my
business. This does not obligate
me to buy

Name

Address

No. of men

THE KEYSTONE

To the Jewelry Trade

WE make the National Self-Winding Clock.

The only self-winding clock which has a "soldered" contact counterpoised on the center staff which therefore requires no power to make the electric contacts.

The only self-winding clock which can utilize all the electric power of the batteries.

The only self-winding clock which will run from one to three years on one set of batteries.

The only self-winding clock which because of its simplicity and durability can be easily adjusted by any and every jeweler.

The only self-winding striking clock which is an accurate timekeeper--which is really satisfactory--which is guaranteed.

We want you to sell the National Self-Winding Clock--for there is as large if not larger profit in it for you as there is in any other clock made.

We want to eventually have the National Self-Winding Clock sold exclusively by the jewelers of this country.

And to that end at a cost of many thousands of dollars

We Are Advertising These Clocks

in many of the leading Monthly Magazines and Periodicals throughout the United States.

These advertisements will be read by

About 5,000,000 People Who are Bound to be Interested

Who are sure to be buyers because we let them test the National Self-Winding Clock for thirty days at our expense.

Now we want to know if you will deliver the National Self-Winding Clock to the customer we will send you and so make your profit on it, without any bother or worry of making the sale.

And we want you to tell us now if you will--so we can ship the clock promptly to you when it is ordered from us.

Please mail us this coupon today for our advertising starts this month (March).

The National Self-Winding Clock Co.,
Champaign, Illinois.

Please send me all information about the National Self-Winding Clock—your Clock Book and Wholesale Price List. I will be glad to handle the National Self-Winding Clock when you send me a bona fide customer for same.

My name.....

Street.....

City..... State.....

Date.....

SEE OTHER PAGE

The National
Self-Winding Clock Co.

Capital Paid Up
\$1,000,000

Champaign, Illinois

"It Winds Itself"



These are some of the styles of the National Self-Winding Clock, made by the National Self-Winding Clock Co.

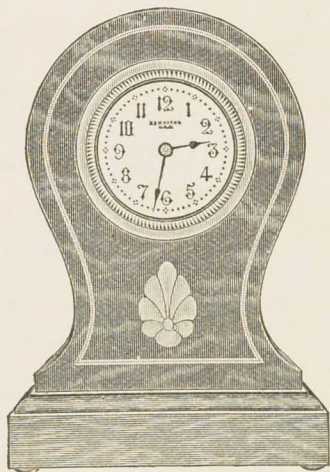
Capital Paid Up, \$1,000,000

Champaign,

Illinois.

BOUDOIR ALARMS

Fitted with our celebrated Intermittent Alarm Movement, which rings every twenty seconds for five minutes on a bell-metal gong on back of clock. Alarm can be stopped by turning a switch.



EUNICE ALARM

Height, 6½ in. Width, 4½ in. Dial, 2 in.

Solid mahogany, with inlaid marquetry decorations. A number of styles in Wood and Gold-Plated Novelties to select from.

Write for illustrations and prices

The New Haven Clock Co.

Dept. M

New Haven, Conn.

PHILIP PRESENT

207 Chamber of Commerce Building

ROCHESTER, N. Y.

Manufacturer, Importer and Jobber

**Watches, Diamonds, Jewelry
Silverware**

Tools and Material

A large assortment of Loose and Diamond Jewelry carried in stock

ORDERS FILLED PROMPTLY

READY FOR YOUR BUSINESS

SEND IN YOUR ORDERS

Everything in American

Tools and Materials

Get our prices
for PLATO
CLOCKS

Send for
Prices on our New
Nickel Alarm Clock and the
New Guaranteed Dollar Watch,
Stem Wind and Set.

WHOLESALE

Order from
any catalogue

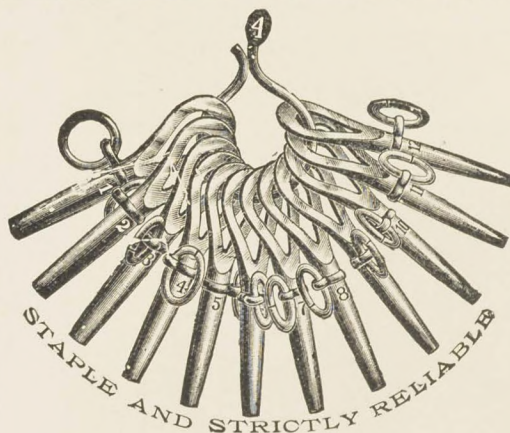
Jobbing Stones
Novelties and Souvenirs

Mail Orders our Specialty

L. COHEN & CO.

630 Pennsylvania Ave., N. W.

Washington, D. C.



**We Blank
Form
Swedge**

Our finish finest for
the money

Submit sample for
our price

A. N. Clark & Son, Plainville, Conn.

We do RELIABLE

Silver-Plating

Silverware

Repairing



Can this be Repaired?

Yes!

We Repair any article in the Silverware line, making new parts to match the old ones,
broken or melted off, the same as new.
We Replate any article you want in Gold, Silver, Nickel, Bronze, Brass, Oxidized Silver,
Old Bronze, Statuary Bronze, and all the Antique or Old Finishes, etc.

Silverware
Repaired and
Replated

Sercomb Company

F. H. PUTNAM, Manager

1429 Wabash Ave.
CHICAGO



WE BUY

Old Gold and Silver Filings, Polishings, Sweeps, Hand Washings, etc. We will make accurate valuations and hold consignment subject to your acceptance. If valuation is not satisfactory, we reship to you at our expense.

WE PAY FOR OLD GOLD:

22 K. 88c. per dwt.	12 K. 48c. per dwt.
20 K. 80c. "	10 K. 40c. "
18 K. 72c. "	8 K. 32c. "
16 K. 64c. "	6 K. 24c. "
14 K. 56c. "	4 K. 16c. "

MARKET RATES FOR SILVER AND PLATINUM

Try us and you will appreciate our Squareness, Promptness and Accuracy

T. B. HAGSTOZ, LTD., Main Office, 709 Sansom St., Philadelphia, Pa.

SMELTERS, ASSAYERS, REFINERS

WE SELL

Gold, Silver and Platinum, various qualities, rolled flat or drawn to wire of any gage.

PRICES OF ALLOYED GOLD:

10 K. 48c. per dwt.	14 K. 64c. per dwt.
12 K. 56c. "	16 K. 72c. "
	18 K. 80c. per dwt.

Gold and Silver Solder, either from formulas furnished or our own. "T. B. H." Alloy, 25c. per oz. Guinea Gold, 75c. per lb. Shot Copper, 40c. per lb. We will send tables for alloying without charge. They save figuring.

PHONES { CENTRAL 3060
AUTOMATIC 9196

ESTABLISHED 1870

CABLE ADDRESS 552 g
SWARTCHILD-CHICAGO

Swartchild

JOBBER AND

WATCHMAKERS', JEWELERS'

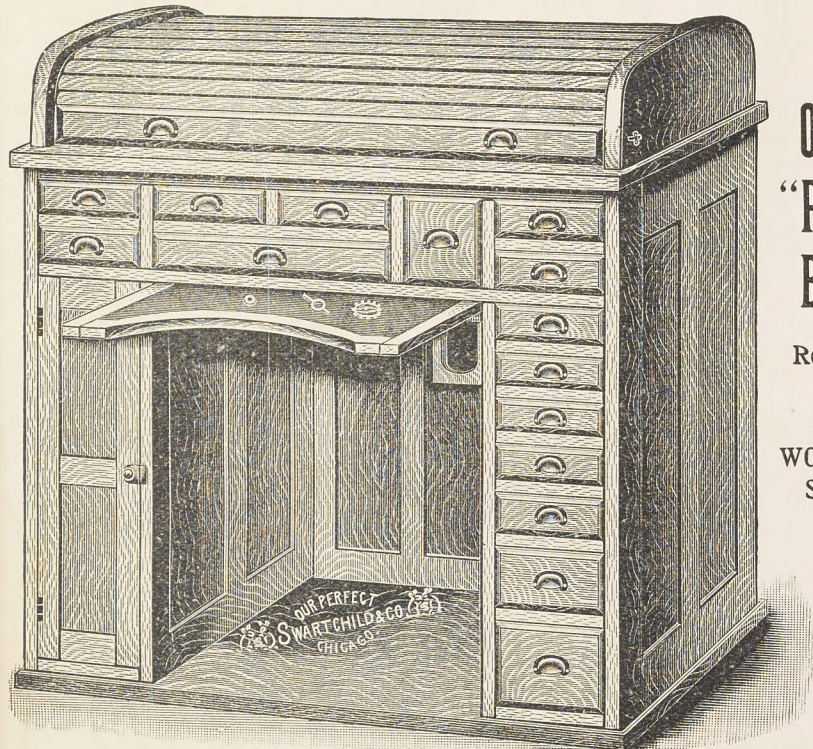
JEWELERS' BUILDING, 134-138 WABASH AVE., CHICAGO, ILL.



& Company

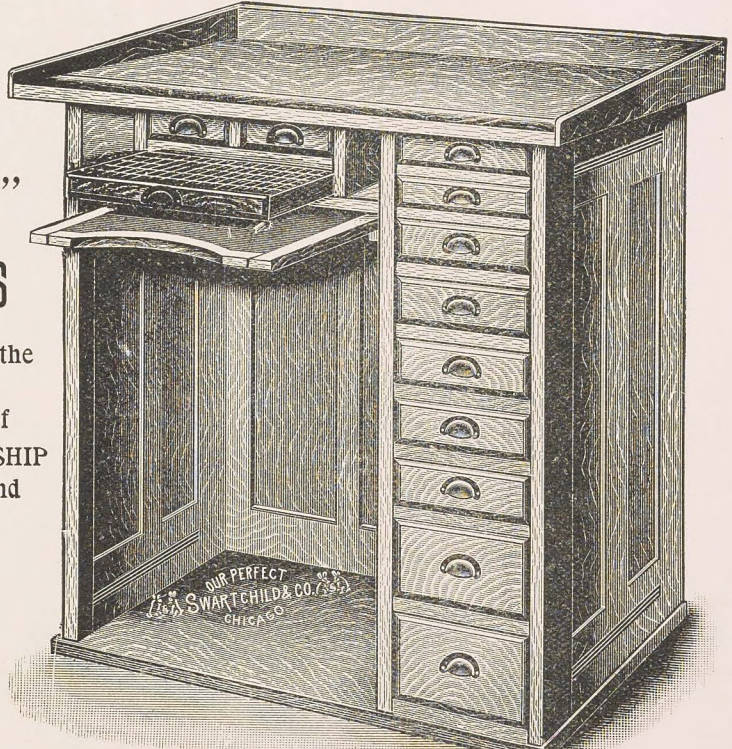
IMPORTERS OF

AND ENGRAVERS' SUPPLIES



Our
"Perfect"
Benches

Represent the
Highest
Degree of
WORKMANSHIP
STYLE and
FINISH



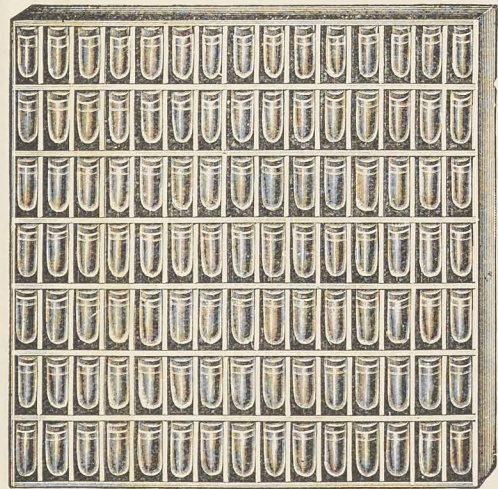
"Perfect"
Curtain Top Bench

No. L204. Length, 44 inches, height, 40 inches; width, 26 inches; in solid oak or mahogany finish. Price, \$25.00.
No. L205. Same bench, with material bottle drawer with bottles as shown below. Price, \$27.25.

"Our Perfect" Benches are intended to harmonize with the finest fixtures of a modern jewelry store. Their beautiful appearance cannot be shown in any illustration; however, we willingly assume the guarantee to please.

"Perfect"
Watch Bench

No. L206. Made in solid oak, handsomely paneled, gilt trimmings, 12 drawers to suit all kinds of tools. One chalk division. One apron drawer. Length of bench, 40 inches; height, 40 inches and 20 inches wide. Price, \$13.00.
No. L207. Same bench, with material bottle drawer with bottles as shown below. Price, \$15.25.



Size of Bottles

No. L213. Bench Drawer Material Tray
New Bench Drawer Material Tray Made to fit Large Center Drawer of Work Bench

The most convenient place to keep your watch material. Always within reach. We furnish this fitted to all of "Our Perfect" Benches. We will send the Tray for large drawer of your bench if you submit exact inside dimensions of drawer.
No. L213. Tray complete with bottles. Price, \$2.50.

"Perfect" Jewelry Repair Case

Can you afford to do without it? No more mistakes possible! Every job in its proper place! No time wasted looking for it!

This addition to our "Perfect" line of novelties is a handsome Cabinet of solid golden oak or mahogany finish, destined to hold conveniently Jewelry and Optical Repairs of almost any size, which may come to a jeweler for repairs. Each of the 20 drawers is provided with a neat letter in alphabetical order. The large lower drawer will be found a handy addition for tags, envelopes, etc.

Dimensions: Cabinet, 30 inches long, 23 inches high, 9 inches deep. Drawer, 4 1/2 inches wide, 3 inches deep, 7 1/2 inches long. Lower drawer, 26 inches long, 3 inches deep, 7 1/2 inches wide. Price of cabinet, 21 drawers. \$6.75.



**LAST BUT NOT
LEAST**

ALBERT

BROS.



Yes, That's It Exactly

☛ You get it quick. You get it right. You are suited when you send your mail orders to the Cincinnati Quick-Delivery Wholesale Jewelry House.

☛ Our quick service and reliable goods make everything satisfactory in buying your goods by mail. That is what our service means.

☛ We can do lots of good to everyone in the retail jewelry business in the Central West and Southern territory, because we have the location for quick shipment and the kind of goods that every jeweler wants. We invite your mail orders.

☛ Send for our Catalogue. It lists over four thousand items and illustrates nearly every one. It should be an important part of your buying department, Mr. Jeweler, for it will be the standard by which close buyers gage prices. If your name is not on our mailing list, it should be. Send for this catalogue. It will surely save money for you. It is free to regular jewelers.

ALBERT BROS.

The Quick-Delivery House

Cincinnati, Ohio

"Chains That Sell"

THE MARK OF MERIT, THE SYMBOL
OF RELIABILITY, THE JEWELER'S
SAFEGUARD IN SELLING
GOLD FILLED CHAINS
IS THIS

TRADE-MARK



L.S. & CO.

WE ARE NOW READY WITH
OUR MAGNIFICENT

NEW SPRING LINE

THE LARGEST YET—WITH MORE STYLE
AND GREATER VARIETY THAN EVER BEFORE

LOUIS STERN & CO., Chainmakers and Silversmiths
Providence, R. I.



LINE OF
IMPORTED

JUST ARRIVED—THE MOST COMPLETE

CLOCKS and NOVELTIES

FOR

1906!

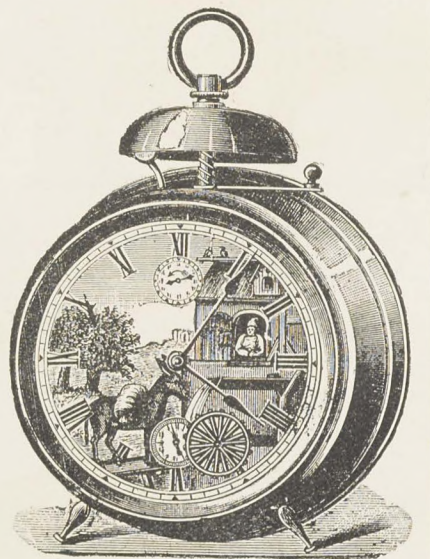
Cuckoo Clocks

Alarm Clocks

Fancy Clocks

Chime and Quarter Strike Clocks

Regulators



AUTOMAT
6 Assorted Motions



ELECTROLIERS AND NOVELTIES FOR THE JEWELRY TRADE

I. BACH & CO.

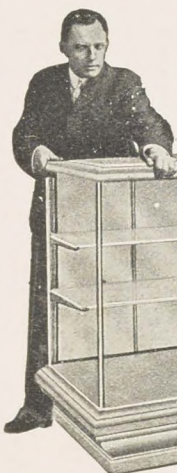
484 Broadway

NEW YORK

ASK YOUR JOBBER FOR OUR CLOCKS

THEY SELL QUICKLY, GIVE SATISFACTION AND ALLOW A GOOD PROFIT

WRITE FOR OUR CATALOGUE



TRY THE
"Quick Sales" Route

*High-Grade
Jewelers'
Cases a
Specialty*

Begin moving on the "Quick Sales" route at once. It is the one sure, profitable line to selling success.

Illuminated "Quick Sales" Show Cases

display the goods at their best, and our line includes cases for inside and outside; for wall, pillar, post and vestibule. Why not turn all the blank space around your building into paying property. We will show you how. Write for suggestions. Sent FREE.

DETROIT SHOW CASE CO. Dept. C

"Show Case Makers to Progressive Merchants"

476-490 West Fort Street, DETROIT, MICH.

JOHN PETZ, Pres. and Supt.

HERBERT MALOTT, Sec'y and Treas.

HAVE YOU GOT IT YET?

Our new booklet, "Listen to Petz," is a winner. Gives valuable suggestions for attractive store fronts. Yours for the asking. Write now.

Hand-sewed pendant, with composition base, to prevent leather creeping.

Samples gratis to the Trade.

Highly nickel-plated buckles and letters mounted on a fine quality of black leather.

18,206

Initial Fobs like this cut were sold in New England in the year 1905

\$2.25 Per Dozen

EXACT
SIZE



Put up on individual white tissue cards

An attractive leader to retail at 25c.

J. E. Duncan, Jr., Manufacturer
Arlington Heights, Mass.



BEWARE
OF
IMITATIONS

FULL NICKEL PLATE

IN COMPARING PRICES WITH
OTHER LATHES, LEARN THE
DIFFERENCE IN SIZE,
QUALITY AND DETAILS
OF CONSTRUCTION

Lathe, including Taper and Screw Chuck,
6 Cement Chucks and belting . . . \$29.00
Extra Wire and Wheel Chucks75 each

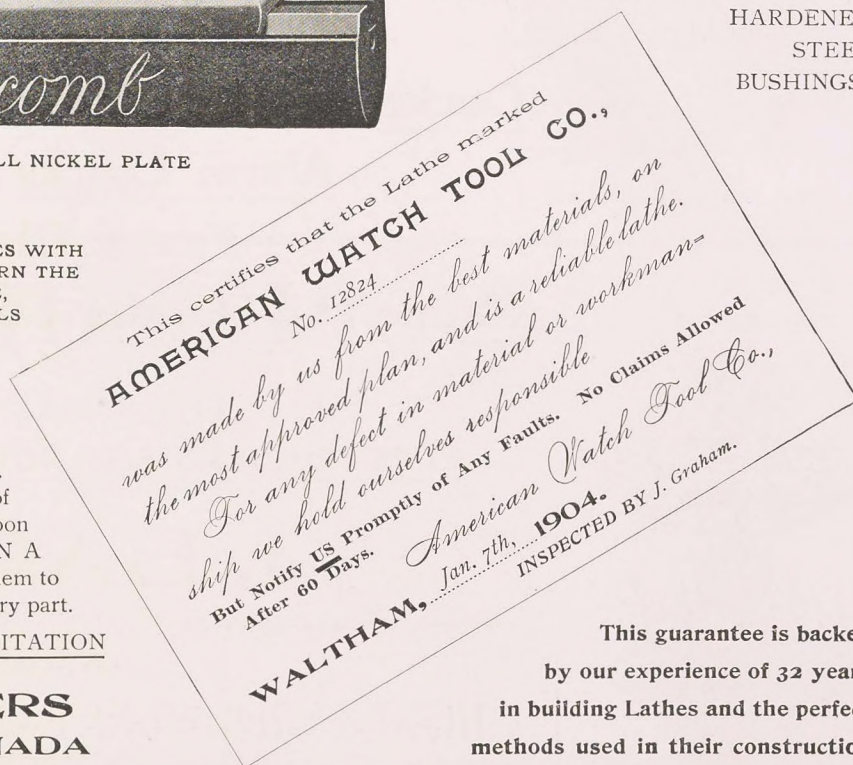
A CHUCK MAY LOOK ALL RIGHT, YET BE ALL WRONG.
Our Chucks are made of the very best steel and absolute concentricity of
cone, thread and hole is obtained by the most improved methods based upon
years of experience. We use no Dies for the threads, but CUT THEM ON A
LATHE; nor do we file and polish the cone, body or hole, but GRIND them to
a standard on special grinding machinery and guarantee perfection in every part.
WE CAUTION YOU AGAINST THE IMPERFECTIONS OF THE IMITATION

FOR SALE BY ALL JOBBERS
IN THE UNITED STATES AND CANADA

555
PERFECT
CONSTRUCTION

IN EVERY DETAIL

HARD SPINDLES RUNNING IN
HARDENED
STEEL
BUSHINGS



This guarantee is backed
by our experience of 32 years
in building Lathes and the perfect
methods used in their construction

THE TRUE BLUE


Beaded Label

French Watch Glasses



The Crown Watch Glass



Note the  and beware of imitations

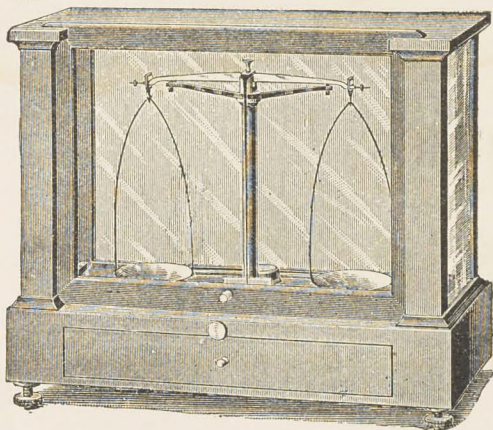
Ask your jobber for them

SUSSFELD, LORSCH & Co.

Wholesale Agents

PARIS
21 Rue de l'Echiquier

NEW YORK
37 Maiden Lane



No. C. DIAMOND BALANCE

HERMAN KOHLBUSCH, SR.

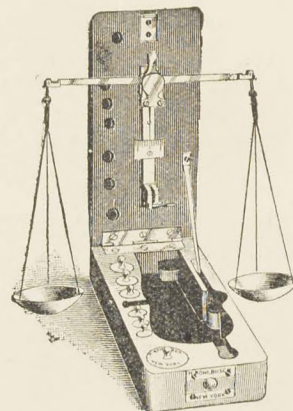
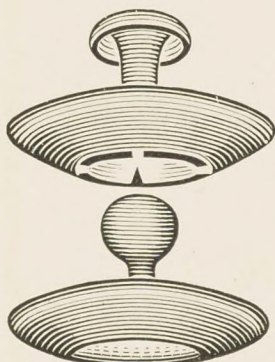
MANUFACTURER OF

Fine Balances and Weights

FOR EVERY PURPOSE
WHERE ACCURACY IS REQUIRED

194 Broadway, New York, N. Y.

SEND FOR CATALOGUE

UPRIGHT POCKET DIAMOND
SCALENEW
IMPROVED

DETACHED

ATTACHED
ACTUAL SIZE

THIS PART is buttoned through the cuffs and then attached through base to lower button with a snap fastener same as a glove.

THIS PART is a ball top Collar Button and used same as any sleeve button. The ball holds at any angle when attached.

"ITSOEZIE"
BUTTON CUFF FASTENER

Snaps Together

A simple device for attaching and detaching cuffs.

For Sale by All Leading Jobbers

The Gold Plate Cuff Fasteners are put up in handsome glass-top display cases holding 3 dozen pairs, each pair in a small individual box.

Price \$24.00 per Gross Sets

Less 6 per cent. 10 days; 5 per cent. 30 days

Also made in Nickel to Retail for 10 cents a set

Chicago Cuff Holder Co., 185-191 Adams Street, Chicago



DETACHED.

HOLDS
IN ANY
POSITION

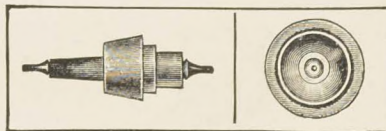
BEST AMERICAN-MADE

Balance Staffs

Gray Finish : : : \$1.00 per doz.
Bright Polished : : : 1.25 "

Spectacle Screws, 50 cents per gross

Imperial Mainsprings, \$12.00 per gross

Your mail orders are solicited, and will have our prompt attention.
Selection packages sent upon application to responsible dealers.

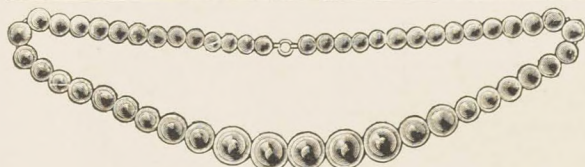
Balance Hole Jewels

Garnets : : : \$1.00 per doz.
Ruby and Sapphire, Fine Finish, 1.50 "

Genuine Roller Jewels, Watch Crystals at catalogue prices.
Many new styles in Ladies' and Gents' Fobs, Chains, Rings,
Carded Jewelry and Emblem Goods.

JEWELER'S GUILD DISTRIBUTING CO., Manchester, Iowa

J. F. McEwen, Manager



NECKLACES

LATEST FAD

Imitation bead necklaces
in all shades

A Few Suggestions

Coral : : : Amethyst
Turquoise : : : Sapphire
Pearl, etc.



FANS

Headquarters

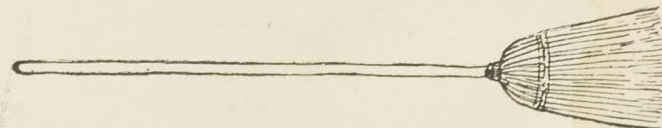
for the most exclusive line
of French and Vienna Fans

WRITE FOR SAMPLES

LOUIS STEINER, Importer, 520 & 522 Broadway, New York



MONEY IN SWEEPS



Have you any old gold or silver for sale?
Are you satisfied with your past returns?

You don't know how valuable your sweeps are if you have not tried us. We have enlightened hundreds of your brother jewelers on this point—and greatly to their benefit. All our patrons are satisfied patrons. Many of them tried all others before coming to us; some of them tried others after; but all are still with us. Full and prompt returns or goods returned at our expense without delay.

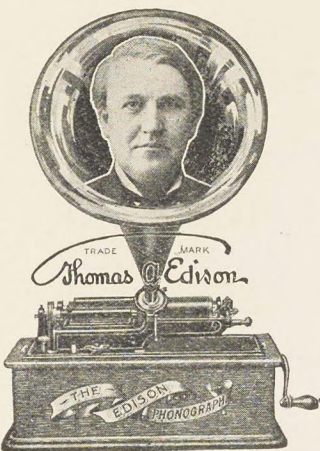
Howard S. Kennedy

Sweep Smelter and Assayer

9-11 Maiden Lane, New York

Edison Goods

A Money-Making Side Line



Every jeweler can conveniently handle Edison Phonographs and Records as a side line. It will not interfere with your business; on the contrary help it by attracting a desirable line of trade to your place. There is a profit of 66⅔ per cent. on every dollar invested in Edison goods, with no competition to meet as prices are strictly maintained. Owners of Edison Phonographs always want the latest Records, and become continuous customers.

Then again our extensive advertising has created an unequaled demand for Edison goods so that it will be an easy matter for you to make sales.

Start in now with a complete stock and make money all year round.

National Phonograph Co., 55 Lakeside Ave., Orange, N. J.

31 Union Square, NEW YORK

304 Wabash Ave., CHICAGO, ILL.

Silversmiths' Bldg.
131-137 Wabash Ave.

C. G. Breitenbach & Co.

CHICAGO

ESTABLISHED 1889

Headquarters for Rogers' Celebrated
Knives, Forks and Spoons

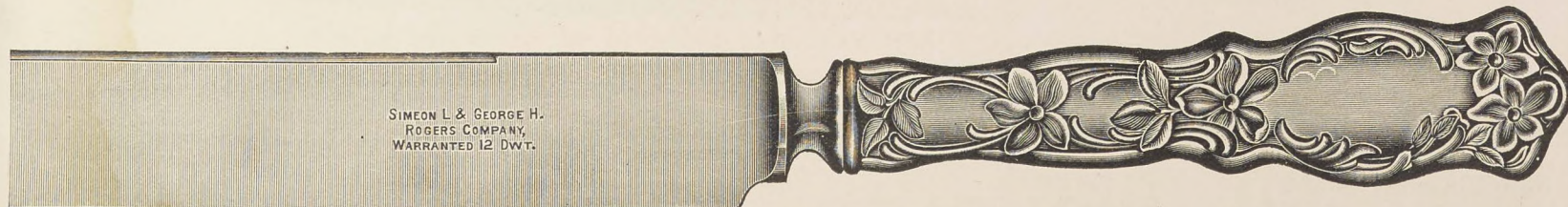


This cut shows sectional plate spoon which is extra heavily plated on wearing parts, as above, and sold by us at price of A1 Standard plate.

ALL GOODS
GUARANTEED

SIMEON L. & GEORGE H. ROGERS COMPANY
MANUFACTURERS OF
Sterling Silver & Silver Plated Ware
Factories: HARTFORD AND WALLINGFORD, CONN.
C. G. Breitenbach & Co.
Exclusive Agents
for the Western Territory

We are exclusive western agents for W. H. Rogers high-grade plated ware and the E. H. H. Smith Silver Co.'s art silver; also Rogers celebrated hollowware. We carry a complete stock of all brands and can fill orders at a moment's notice.



No. 600. Violet pattern, hollow handle, medium knife, silver or French gray finish. Send for price-lists

If you contemplate a sale or auction, and jobbers' prices will interest you, write us at once. We are the largest distributors of silverware in the world, and can give you the lowest prices and best service.

We have an able force of auctioneers whom we recommend to the trade.

The "Bryant" Rings.

TO THE RETAILER:—If you want a line of RINGS that will sell at sight and pay you a good profit—Rings that will not come back with the stones out, to plague you—try the BRYANT RINGS. We have made and sold them for 50 Years.



Trade-Mark

M. B. BRYANT & CO.

7 Maiden Lane, NEW YORK

FIRE

SEND AT ONCE

for the most complete Catalogue of Fire and Police Department Badges ever published

THE C. G. BRAXMAR CO.

Manufacturers

No. 10 Maiden Lane, NEW YORK

POLICE



EXTRA X ★ F FINE



SWISS PATTERN FILES

FOR WATCHMAKERS, JEWELERS, FINE TOOL MAKERS, DIE SINKERS AND OTHERS
WHOSE WORK REQUIRES GOOD TOOLS

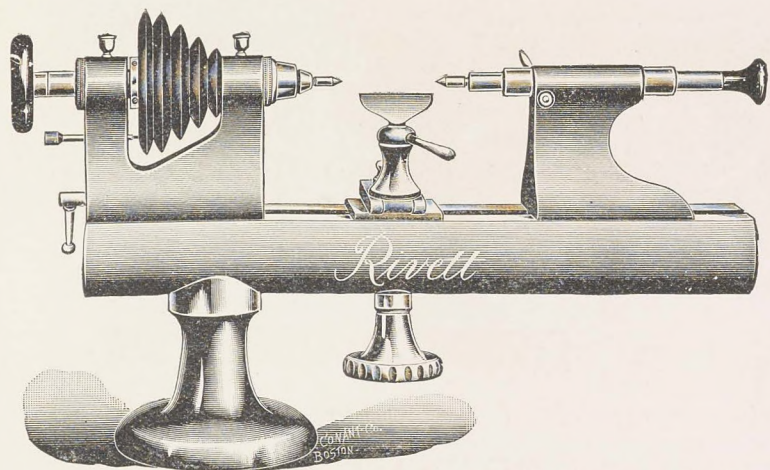


THEY ARE SUPERIOR TO ALL OTHERS OF DOMESTIC OR FOREIGN MANUFACTURE

ASK FOR OUR CATALOGUE

NICHOLSON FILE CO.

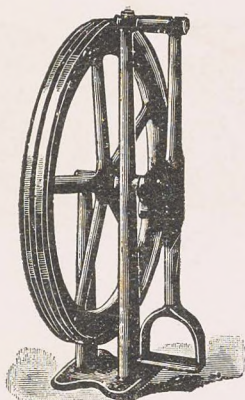
PROVIDENCE, R. I., U.S.A.



We are Headquarters for **WATCHMAKERS' LATHES**, and have always on hand a large stock of Webster-Whitcomb, Rivett, Moseley, Hopkins and Imported Lathes.

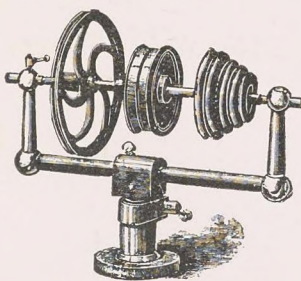
Price-List of Lathes, which includes 6 Wire Chucks, 2 Wheel Chucks, 1 Taper Chuck, 1 Screw Chuck, 6 1/4-inch Cement Chucks and 9 feet Belting.

No. 181.	Webster-Whitcomb Lathe, as described above,	price, \$35.00
No. 182.	Moseley " " " " " "	35.00
No. 183.	Hopkins " " " " " "	30.00
No. 184.	Rivett Steel Bed " (12 Chuck Combination)	42.50



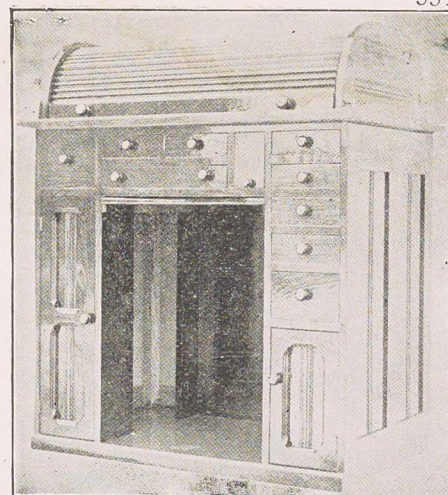
Foot Wheel No. 172

A first-class Wheel suitable to any Lathe. Smooth running. Wheel alone weighs 40 lbs; wheel complete weighs 60 lbs. Price, \$5.50 Net.



Countershaft No. 175

Adjustable, Full Nickel-Plated with Pulleys for Flat or Round Belting with Speed Wheel. Price, \$2.60 Net.



Watchmakers' Bench No. 178

Roll Top with all the latest improvements, has an extra fine Cabinet finish, contains nine drawers which are locked automatically, one drawer being arranged for Chucks, also an apron drawer and Chalk Box with sliding lid.

Size 44 inches long, 26 inches wide, 40 inches high, with Casters, curtain elevated nine inches. Made in Walnut, Oak or Cherry.

Oak	Price, \$15.50 Net
Walnut . . .	" 16.50 "
Cherry . . .	" 16.50 "

Orders filled from any Catalogue

KORONES BROS.

32 Maiden Lane and
38 Chrystie Street, New York

Importers
and
Jobbers of

Watches
Clocks
and
Jewelry

Watchmakers'
Tools, Materials
Jewelers'
Supplies

Optical
Goods
and
Silverware

United States Smelting and Refining Works

L. & M. WOLLSTEIN

Office: 16 John Street, New York

Telephone, 5644 Cortlandt

Works: 17 John St., New York

Sweep Smelters and Assayers

Refiners of all kinds of Gold, Silver, Platinum, Waste
Manufacturers of Sterling Silver

Highest prices paid for Old Gold, Old Silver, Platinum Scraps
Ore and Bullion Assays a specialty

Proprietor of Platina Melting Furnace and Gold and Platina
Filing Separating Process of greatest advantage to manufacturers
of Platina Jewelry

The Matchless Pocket Cigar Lighter

The only perfected cigar lighter on the market

Made in Gun Metal, Aluminum, Brass, Silver Plate
Gold Plate and Solid Gold

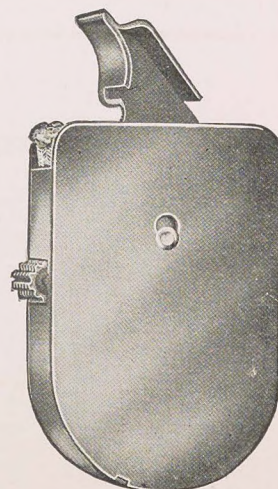
Write for Prices

**The Matchless Cigar Lighter
Manufacturing Co.**

Office and Salesroom

16 John Street

New York, N. Y.



"THE OAK"

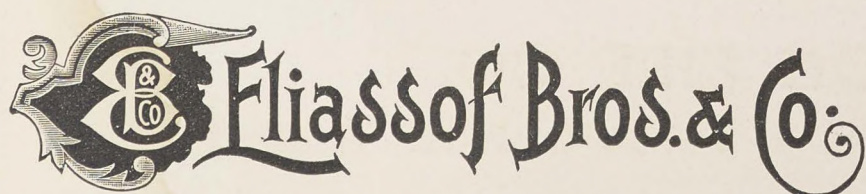
Silversmiths' Bldg.
Chicago, Ill.

BRIDGEPORT, CONN.

E. H. H. SMITH SILVER CO.

Manufacturers of

**Sterling Effects
in Plate**



A LARGE ASSORTMENT OF DIAMOND-MOUNTED JEWELRY CARRIED IN STOCK

IMPORTERS
AND
JOBBER OF

**Diamonds
Watches
Jewelry**

9-11-13 Maiden Lane
NEW YORK

100 State St.
ALBANY, N. Y.

TRADE—"1847 ROGERS BROS."—MARK

The Silver Standard

THEN—1847—AND—1906—NOW.

ESTABLISHED IN 1847 BY ROGERS BROS.

ISSUED BY

MERIDEN BRITANNIA CO., MERIDEN, CT.
(International Silver Co., Successor.)

VOL. II—No. 2

"It shows what advertising will do," perhaps you say. But it does n't. Advertising is an important part of modern business methods, but its importance does not compare with the importance of keeping the goods advertised up to the recognized standard, the result of honest material and skilled workmanship.

Advertising will sell goods, but no amount of advertising will continue to prove

SPRINKLER

BARREL-LIKE AFFAIR THAT I AM
THE DISC

ANY DEALER

who has not received the "Silver Standard" or who is not thoroughly familiar with our methods of co-operative advertising, will be sent a copy of the "Standard," with other interesting printed matter, upon request.

Meriden Britannia Co.
(International Silver Co., Successor)
Meriden, Conn.

The Silver Standard

ESTABLISHED IN 1847 BY ROGERS BROS.

FIVE CENTS.

APRIL, 1847.

VOL. II. No. 2.

THE EVILS OF PRESENT TARIFF

FUTILE EXPLANATIONS ATTEMPTED

SECRETARY OF THE TREASURY WALKER
MAKES ABSURD STATEMENTS IN
HIS REPORT.

We have a report from Secretary Walker on the subject of the Tariff in answer to a resolution of the Senate. This document, like all others emanating from the same source, displays the most consummate ignorance of the first principles which govern the subject upon which the Secretary undertakes to give advice to the Senate.

Instead of examining his subject with Statesman-like views, and coming out manfully and proposing an increase of duties that would stimulate the industry of the country and augment its powers of consumption, so as to insure a demand for foreign productions commensurate to such power; he goes into comparisons of the imports of 1845 and 1846, predicated upon his reasoning upon the amounts of the different articles imported, upon the rates of duty; as though the quantity of goods imported depended upon such rates, when every tyro in political economy knows that demand and supply are the great regulators of trade of all kinds, foreign and domestic.

Now, it is a fact well known that the Tariff of 1846 has diminished, and it will continue to diminish the number of artificers and manufacturers; for the very reason, that, as Mr. Walker states, at lower duties it produces an increased revenue by supplanting articles made at home with similar importations from abroad.

It is very much to be feared that the continued heavy drafts upon Great Britain for specie will cause a financial crisis there, which will inevitably react upon us.

The following comparison is given of the receipts into the Custom House at the places named, for the first fifty-five days of the last and present year, to wit:

	1846.
Boston,	\$674,107
New York,	1,971,405
Philadelphia,	299,708
Baltimore,	43,061
Charleston,	41,174
	\$3,029,4

	1847.
Boston,	\$862
New York,	2,374
Philadelphia,	348
Baltimore,	8
Charleston,	6
	\$3,7

Mrs. Jane C. of the estate of Washington, now to dispose of all her lands, including the buildings, great tombs, to the Congress.



JOHN QUINCY ADAMS, whose eloquence and physical power, remarkable, will be 80 years of age on the 11th of next

The unique house organ which is published by the concern generally has half of its eight pages devoted to the news of fifty-nine years ago, the eventful year when Rogers Bros. established a silver standard which is more secure than the standard of 16 to 1. The pages devoted to the exploitation of modern old style "silver plate that wears" are essentially modern, and would doubtless surprise the inventor of the daguerreotype, who flourished about 1847. The "Vintage," the pattern to which two pages are devoted, is not of the vintage of 1847 as to style, but as to quality it is in accordance with the commercial traditions of "1847 Rogers Bros." goods and as much beyond it as is in keeping with the progress made since Rogers Bros. discovered the process of electro-silver plating in 1847.

The writer of this, in a long article published several years ago entitled "How Wholesalers and Retailers Work Together," took his text largely from the efforts made in co-operative advertising by the Meriden Britannia Co. who are pioneers among the wholesalers who are getting together in connection with the wholesalers and retailers. This is only one of many ways which the Meriden Britannia Co. use to help the retailer to help himself as well as the company.

TO PREVENT R. R. ACCIDENTS

NEW INVENTION THAT PROMISES MUCH

DEVICE THAT, IT IS EXPECTED, WILL
KEEP TRAINS FROM RUNNING OFF
THE TRACK.

The annexed engraving is a view of an improvement in Railroads, by Robt. Mills, Civil Engineer and Architect, Washington, D. C., the object of which is to attain a very high speed, and at the same time prevent accidents by running off the track, or by collisions. Two trains are shown running in opposite directions.

This plan of railroad is proposed for the New Pacific Line. At an early period in the history of railroads in the United States, Mills turned his subject, to sustain the cars in equilibrium, on a difference of the load on either side of the rails will not effect its vertical position; but to meet any exigency another rail, one on each side of the cars, is placed sideways against the upright pillars at the bottom line of the cars, which, by means of friction rollers placed on the lowest inner edge of the cars, will insure the vertical position of the carriage, and thus the motion of the cars will be easy and free from change. We hope much from this.



TELEGRAPHIC FEAT—On the 1st inst., the train of cars on the Utica and Albany line, N. Y., ran off the track at Fonda, when Mr. Porter, of the Telegraph at Utica, being one of the passengers, sprang from the car and cut one of the wires, and sent an account of the accident to Utica.

This was done by grasping the cut wires with some non-conducting substance between the fingers, and bringing the two wires in contact to complete the break of the circuit, and thus actuate the pen lever at Utica, making it write the message. A journalistic and telegraphic feat worth recording.

NEW INVENTION—EACH

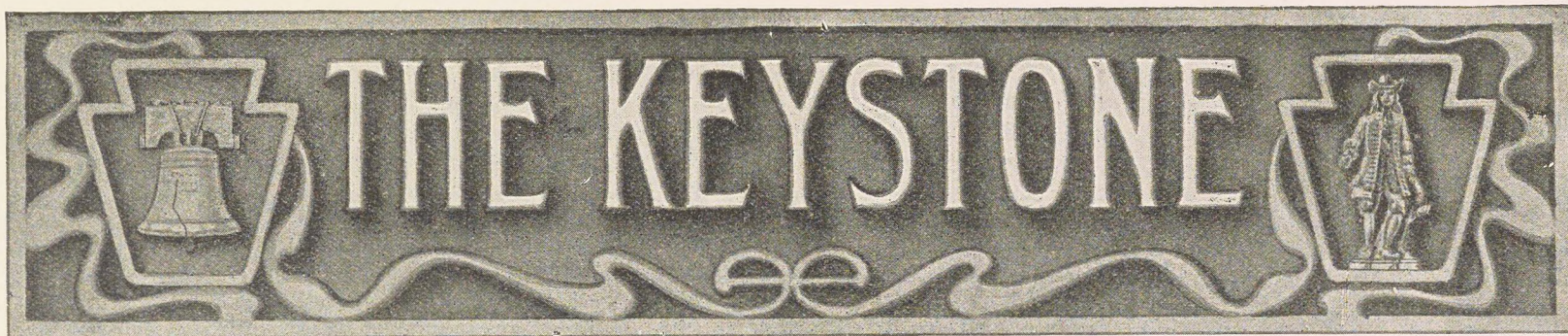
BLACK NOSES FOR CONVICTS

A resolution has been introduced into the Kentucky Legislature, which provides that the keeper of the Penitentiary shall procure a certain chemical dye, such as will stain the cuticle or outer surface of the skin perfectly black, so that it cannot be washed off, or in any way

removed, until time shall wear it away, and shall furnish a new cuticle or surface; and that with this dye he shall have the nose of each convict painted thoroughly black.

the purpose of permitting nature to restore to the feature its original hue, preparatory to the second advent of its owner into the world. Surely a novel plan.

We are indebted to the American Review, Hampden Post, Scientific American and others for material in this issue of the "Silver Standard."



A monthly journal devoted to the interests of the Watch, Jewelry and Optical Trades. The purpose and policy of this journal are the protection and promotion of all trade interests. A rigid censorship assures the reliability and worth of all reading matter, and the exclusion of all that is not trustworthy or relevant. We decline to insert advertisements that are unreliable, or misleading in representation, defamatory in statement or detrimental to the welfare of the trade.

Vol. 27

Philadelphia, April, 1906

No. 4

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Entered as second-class matter at the Philadelphia, Pa., Post-office

THE KEYSTONE

A Monthly Journal Devoted to the Interests of the
Watch, Jewelry and Optical Trades

Subscription—One Dollar per year, postpaid, to all parts of the United States, Hawaii, Porto Rico, Philippines, Guam, U. S. Island of Samoa, Cuba, Mexico and Canada (except Newfoundland); single copies, regular issues, 15 cents; special issues, 25 cents. To Foreign Countries, 10 Shillings (\$2.44) per year; single copies, 1 Shilling (25 cents).

Payment for THE KEYSTONE, when sent by mail, should be made by a Post-Office Money Order, Bank Check or Draft, or an Express Money Order. When neither of these can be procured, send the money in a Registered Letter. All Remittances should be made payable to THE KEYSTONE PUBLISHING CO.

Change of Address—Subscribers desiring their address changed, should give the old as well as the new address.

Advertisements—Advertising rates furnished on application. No advertisements but those of a reputable character will be inserted.

To Advertisers—Copy for advertisements must reach us by the 25th of each month to insure insertion in the issue of the following month. Changes in advertisements should reach us not later than the 18th of the previous month. All communications should be addressed to

THE KEYSTONE PUBLISHING CO.

CHICAGO OFFICE 809-811-813 N. 19TH STREET
42 MADISON STREET PHILADELPHIA, PA.
LONDON OFFICE 45 HOLBORN VIADUCT, E. C.

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Prospects for a Stamping Law

THE stamping measure introduced in the House of Representatives by Congressman Vreeland and referred to the house committee on inter-State and foreign commerce was favorably reported by that body after a public hearing which was chiefly remarkable for the entire absence of opposition to the proposed legislation. The possibility of its unconstitutionality has been the only suggestion so far which is at all perturbing to the advocates of the measure, who seem encouragingly confident even as to the matter of court revision. It is difficult to predict at this time what developments may arise on the floor of the house, but, all possibilities considered, the prospects of the measure seem exceptionally favorable. The bill left the hands of the committee practically unchanged, except that its provisions are made to include exported goods as well as those for domestic consumption, and the clauses regarding silver goods are made a little more stringent.

The strength of the bill lies mainly in the fact that it has been endorsed and is earnestly advocated by all branches of the trade. The retailers have long hoped for the protection against dishonest competition which such a law would give them, and self-interest dictates a solid support for the present measure. They are fortunate on this occasion in having the organized co-operation of the manufacturing and wholesale interests, and as the protection of the public is the primary and ultimate object of the law, all the forces affected seem to be a unit in its favor.

THE Vreeland bill is a commendable effort to conserve the interests of honesty, and beyond this is by no means radically subversive of the present order of things. Some of our readers, judging by our correspondence, seem to regard it as identical in many respects with the hall-mark law of Great Britain. There is really very little analogy. In the first place the hall-mark law makes stamping compulsory; the Vreeland bill

leaves the stamping optional with the manufacturer. In England the government tests the goods and stamps them, no matter by whom manufactured; under the Vreeland bill the stamping, if done at all, would be done by the manufacturer without any interference by the government. In England the hall-mark is, in truth, an official guarantee of quality; the stamp, under the Vreeland bill, would have no such significance, at least directly, as the United States government would know nothing of the stamped goods, and would accept them as being what the stamp represented until proved otherwise. Of course the Vreeland stamp would be an assurance of quality by inference, as no manufacturer is likely to subject himself to the severe penalty, and non-stamped goods will go to the market with the handicap of suspected quality attached to them.

THE fact should be impressed on our legislators that the proposed stamping legislation is backed by precedent as well as by the trade and public. Its congressional sponsor truly declared: "There is not a country in Europe at present which does not require the stamping of goods made of gold and silver; there is not a country in Europe that has not legislation for the protection of the public against being swindled in the purchase of such goods." And he showed by conclusive argument how necessary, both for the jewelry trade and public, was this legislation. The following quotation from his address before the committee suffices for our purpose:

A manufacturer told me of an order which came to him from one of the largest department stores in the country. The order called for from one hundred to two hundred dozen rings. It was not filled by the gentleman to whom I was talking for the reason that his firm catered to the jewelry trade and not to that of the department store. But that order required that the rings asked for should be made 10-karat fine and marked 18-karat. The question was asked whether they could get the order filled. The manufacturer laughed and stated that he did not think they would find any difficulty about the matter. That any firm would take the order, even with the requirement named, and that such a requirement was not at all unusual; and it is

altogether possible that you can go into any department store and buy rings marked 18-karat, when in reality they are only 8 or 10-karat fine.

It may be that the statement, "that any firm would take the order," was a thoughtless exaggeration, but all know that such orders are given and readily accepted. Such a condition surely makes some measure of legislative protection both a public and trade necessity.

THE Vreeland bill resembles the various State stamping laws in this respect, that it does not provide for any special machinery for carrying out its punitive provisions, leaving to individual merchants or organizations the onus of initiating prosecutions. This proved a serious weakness in the State laws, but in the case of a Federal law a way can be readily devised to put the machinery promptly in motion against all offenders.

Now that the bill is to come before the house the duty of the jeweler is plain. Each member of the trade should impress upon the congressman from his district the merits of the measure and insist on his support. No difficulty lies in the way. A bill that is backed both by the trade and the public, both by right and by precedent, must command the favor of every conscientious legislator.

Are Watch Clubs Legal?

AS we are frequently consulted as to the legality or otherwise of watch and diamond clubs, a suit decided in Philadelphia on March 23d will have an interest for many of our readers. The prosecution in this case was instituted by the Merchant Tailors' Exchange against a local member of that trade who ran a suit club. The members of the club paid a dollar a week, and weekly drawings were held, the lucky drawer obtaining his suit without further payment. It would appear that the prosecution in this instance was instituted as a test case, and the defense accepted it as such, entering no denial of the club's existence or its methods of doing business.

At the conclusion of the defendant's testimony his attorney asked the court for binding instructions in his favor. This was refused by the judge, who held that there was evidence of an illegal lottery, stating that he would so charge the jury, who brought in a verdict of guilty. The defendant's attorney then asked the court to fix a day for argument for a motion for a new trial, where the points of law could be squarely raised and a definite decision reached from which his client could appeal to the Superior Court if it were unfavorable to his interests. To this request the judge acceded, so that there is a probability that the matter will be

finally and definitely decided. We have always advised our readers that watch and diamond clubs were understood to be in contravention of the lottery laws, and the opinion of the Philadelphia judge bears us out.

Price-Cutting Again Enjoined by the Courts

MUCH favorable comment was created among the trade by the announcement in a recent issue that the courts enjoined retailers from cutting the prices of certain articles against the expressed wish of the manufacturers. As price-cutting is one of the pressing evils of the retail trade, any judicial action which will have a tendency to restrict it is naturally very gratifying. An exceptionally interesting case of this character has just been decided by the U. S. Circuit Court for the Southern District of Ohio, the point at issue being whether a manufacturer can or cannot compel his customers to adhere to an agreement into which they have entered not to sell one or more of his products below a certain price.

THE complainant in the case was the firm of Burton Bros. & Co., of New York, who manufacture among other things a fabric known as Banzai silk. This fabric is sold by the firm with the express stipulation that it shall not be disposed of by the retailer at less than fifty cents per yard. This stipulation is put forward in the circular letter in which the firm calls the attention of the trade to Banzai silk; the sample cards also bear a printed statement to the same effect, and moreover, to every piece of goods is attached a label stating that the merchandise was purchased under agreement on the part of the purchaser not to resell at less than fifty cents a yard.

Despite this clear understanding, the Kinnane Brothers Company, of Springfield, Ohio, advertised, on the 12th and 13th inst., that they would sell Banzai silk at thirty-nine cents a yard. Suit was brought by Burton Bros. & Co. in the U. S. Circuit Court in Cincinnati for breach of contract and for the recovery of damages in the sum of \$50,000, with the result that, on March 16th, a temporary injunction was granted, restraining the Kinnane Brothers Company from selling Banzai silks at less than the price agreed upon with the manufacturing firm. A few days later the injunction was made permanent, the decision reading as follows:

"It is therefore ordered, adjudged and decreed by the court that the defendant, the Kinnane Brothers Company, its agents, servants, attorneys, employees and assigns, be and they are hereby each of them perpetu-

ally enjoined and restrained from advertising, selling or offering for sale Banzai silk at a price less than fifty cents per yard in manner and form as prayed for in said bill."

THIS decision, which admits of the widest application, is of far-reaching importance, and several suits of a similar character are now pending. There is little doubt that these will be decided in the same way, and the result will naturally affect the relations between producer and distributor with much advantage to both. Heretofore the retailer has been happy in the assurance that the goods being his, he could dispose of them at whatever price he saw fit; even irrespective of agreements. And he was fortified in this assurance by the opinions of many lawyers who held that a manufacturer has no right to fix the price at which his merchandise shall be distributed, claiming such action to be in restraint of trade, and, therefore, contrary to the provisions of the anti-trust laws.

It would seem from the suits decided that this theory is not tenable. On the contrary, when a manufacturer induces a distributor to agree not to sell his product below a certain stipulated figure, he is required by law to adhere to this agreement.

Enormous Postal Business of Uncle Sam

IF Benjamin Franklin, whose bi-centennial we recently celebrated, were to return, Rip Van Winkle-like, to view the results of his handiwork, we doubt whether any would cause him more wonder than our vast postal system, which, as our first postmaster-general, he originally planned. To-day Uncle Sam does the biggest post-office business in the world—biggest in number of post-offices, in number of letter boxes, in number and length of mail routes, in annual transportation, in postal expenditure and income, and the amount of mail received per capita. This post-office costs about half a million dollars a day; for the fiscal year 1905 expenses were \$167,399,169; receipts were \$152,826,585, leaving a deficit of \$14,572,584. Nor is this deficit in any sense a loss, for if the government paid for carrying its own official mail, the entire deficit would disappear.

THE cost of running the postal department seems surprisingly large compared with the figures for other nations, but this is accounted for by our widely-scattered population and magnificent distances. The two nations coming next to the United States in postal activity are Germany and Great Britain,

whose combined post-offices number less than ours, yet Germany and England and most of Wales could be put into one of our States—Texas. Last year it required an army of 281,437 people to handle the mail of our 60,131 post-offices. Every minute, day and night, during the year, 19,382 pieces of mail were dropped into the mailbox.

The financial branch of the postal system has also assumed enormous proportions. The money order business in the hands of 37,000 postmasters amounts to over a million dollars a day, being \$402,000,000 for the year 1905. In the handling of the \$53,000,000 money orders, so safe and so perfect is the system that only one in 166,000 was paid, or repaid, incorrectly.

Nor is there any prospect that there will be any diminution in the rate of expansion of our postal business. The retail interests of the country are just awakening to the importance of the mail as an aid in their business, and the time is not far distant when every retail store will be in a measure a mail-order house. Then there will be such an expansion in the postal business as is even now undreamt of.

A Stamping Law for Canada

IT is an interesting coincidence that a stamping bill should be introduced in the Canadian parliament at the same time that the Vreeland measure comes before congress. There is but little similarity in the bills, however, the Canadian legislation being markedly protective in character, the intent manifestly being to benefit the Canadian jewelry manufacturing industry by making the Canadian market less accessible to foreign makers. This bill provides that gold jewelry if stamped must not be marked less than 10 K., and such descriptive words as "gold," "solid gold," "pure gold" or "U. S. assay" must not be used. Silver goods must not be stamped "sterling" unless the goods are 925-1000 fine. In gold goods a half-karat leeway is allowed when solder is used; where no solder is used, only one-fourth-karat leeway is allowed. In silver goods stamped "sterling" a leeway of 25-1000 is allowed when solder is used, and of 10-1000 when no solder is used.

IN gold filled and plated jewelry the stamping provision is very radical. It shall be a misdemeanor to manufacture or sell such goods the stamping or tags on which will indicate other than a true and correct statement of the fineness and also the actual weight of the gold or silver or alloy of either of said metals, contained in the articles so stamped or marked or the decimal propor-

tions of the gold or silver or alloy of said metals to the gross weight of the articles so stamped or marked, at the time they are sold or delivered by the manufacturer. All stamped, printed or written guarantees of wearing qualities with gold filled watch cases are prohibited.

The American manufacturers say that compliance with this law would be very troublesome for them and would, in fact, necessitate the special manufacture and stamping of goods for the Canadian market. Even the Canadian trade are not by any means a unit in favor of the measure in its present form. It would greatly simplify trading if the same stamping law prevailed in both countries, but this need scarcely be hoped for.

Daylight Robbery of Jewelry Stores

A DARING daylight robbery, which has an interest for the trade generally, was executed in Philadelphia last month. The *modus operandi* was as simple as it was audacious. Shortly after mid-day two men drove up in front of the jewelry store in a runabout. One of the two entered the store and asked to see some diamonds. When an assortment of some twenty-five stones was shown him he pretended to find a flaw in one of them. He soon succeeded in diverting the attention of the jeweler, and at the opportune moment he seized the gems, ran from the store, jumped into the waiting vehicle and was driven rapidly away. Although the runabout was struck in its flight by a trolley car and practically demolished, the occupants escaped, the pursuing mob and lone policeman giving up the chase.

Three hours later the same two men entered another store in the city and wished to purchase some diamonds. A number of gems were placed before them, but none of these seemed to meet their requirements. A request for stones of a higher grade accomplished their purpose of diverting the jeweler's attention, and each snatched some of the gems, flew from the store and, though pursued, again succeeded in escaping.

Robberies bearing a remarkable similarity to these in Philadelphia are reported from other cities. In Dayton, Ohio, two men drove up to the store in a runabout in precisely the same manner. One entered while the other remained in charge of the vehicle. The *modus operandi* inside the store was exactly similar. A request to be shown some diamonds, dissatisfaction with the assortment shown, the diversion of the jeweler's attention, the seizure of the gems, the flight to the runabout and the disappearance. The only point of difference was that in the latter robbery, a man who attempted to intercept the

fleeing thief, was promptly shot at, showing the desperate character of the confederate robbers.

It is astounding that notwithstanding the warnings contained in such robberies as those described above, jewelers will continue to manifest extreme carelessness in the matter of displaying diamonds. We live in an age when our confidence should be tempered with suspicion, for it is an unfortunate fact that the most plausible of customers are likely to be the most dangerous criminals.

South Africa and its Mineral Wealth

WE have before us a report of the farewell banquet recently tendered in Kimberley to Gardner Williams, the retiring manager of the De Beers company. A perusal of the speeches delivered at the banquet is interesting for the light thrown on the precious subterranean wealth of South Africa, in which the jewelers are vitally interested. The facts stated by the speakers prove that South Africa is the richest territory in the world in natural resources. In fact, its marvelous wealth in this regard is one of the inexplicable phenomena of geological science, South Africa is well known as practically the only diamond-producing territory now known to us, and the rapid rise in the value of the gems emphasizes its unique position as a gem producer. In the sensational newspaper press it is the fashion to make gloomy predictions of the early exhaustion of the diamond mines, but the best-informed authorities in the diamond fields have no such fear. In his banquet speech, Col. Harris, a director of the De Beers Diamond Company, assured his hearers that at the end of the present century diamonds would still be found in the Kimberley mines, and this assurance was the keynote of all the speeches.

It is a singular coincidence that the same country should lead the world in the production of the two kingly commodities of diamonds and gold, yet such is the case. For the first time since the Anglo-Boer war the Transvaal again leads the list of gold-producing countries. The largest production before the war was just under four million ounces, in 1898. The production of 1899 would have been much larger had not the war broken out. But in 1904 the production was a little more than four million ounces, and in 1905 it was 4,897,221 ounces, worth considerably over \$100,000,000! Nor is it in gold and diamonds alone that South Africa is peculiarly favored. There's silver, platinum, manganese, tin, etc., in vast and unexplored quantities, and the country is kept in a continual ferment by the reports of new discoveries.

Waltham Watches

12 Size Hunting or Open-Face
Pendant Setting

Riverside Maximus, Nickel—21 diamond and ruby jewels; 2 pairs diamond caps; both balance pivots running on diamonds; raised gold settings; jewel pin set without shellac; double roller escapement; steel escape wheel; exposed sapphire pallets; compensating balance accurately adjusted to temperature, isochronism and five positions and carefully timed; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels; gold train; steel parts chamfered; fine glass hand-painted dial of the most modern and artistic design. The superior construction of this movement adapts it to the most exacting service.

Riverside, Nickel—19 fine ruby jewels; raised gold settings; double roller escapement; steel escape wheel; exposed sapphire pallets; compensating balance, adjusted to temperature and three positions; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels; red gold center wheel.

Royal, Nickel—17 jewels; red gold settings; exposed pallets; compensating balance, adjusted to temperature; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels.

No. 225, Nickel—17 jewels; red gilded settings; exposed pallets; cut expansion balance; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels; red gilded center wheel.

No. 220, Nickel—15 jewels; settings; exposed pallets; cut expansion balance; patent Breguet hairspring, hardened and tempered in form; patent micrometric regulator; tempered steel safety barrel; exposed winding wheels.

No. 210, Nickel—7 jewels; exposed pallets; cut expansion balance; patent Breguet hairspring, hardened and tempered in form; tempered steel safety barrel; exposed winding wheels.

MANUFACTURED AND WARRANTED BY

American Waltham Watch Company
WALTHAM, MASS.

The Smithville Jewelers' Trust: A Twelve-Month Experiment

Fourth Month

(Copy of a circular note sent by the Chairman to each of the members of the Trust, early in March.)

DEAR SIR,

The March meeting will be postponed to the evening of April 1—"All Fool's Day"—and will be in the nature of an experience meeting, where each one will tell of the *foolish* things he has done in his business career. There will be *no one* speaker to give the principal "talk," but all will be expected to "own up" to his particular foolishness. Bring any outsiders who can similarly make confessions that would be interesting from a trade point of view. There will be, of course, the regular April meeting later in the month,

SOLOMON SILVERPLATE, Chairman.

There was a distinct note of amused expectancy in the greetings exchanged, when the Trust came together on the night of "All Fool's Day." Each member hoped that the others would witness to a more ridiculous reach of assininity than he himself would be obliged to testify to—hoped, but doubted.

Solomon Silverplate rose, buttoning his coat, and said:

"The fitness of the day was the inspiration of Mrs.

Benefiting by Errors

Silverplate's suggestion that we unburden ourselves to-night of the memories of our making fools of ourselves in times past. When one looks back over his experiences, from the viewpoint of that higher elevation which added years give to the vision, he is able to see faults and mistakes in the perspective which the nearby view obscured. What seemed logical and right at the time proves wholly wrong when seen from afar and under another light. And we make progress faster from studying our past blunders and taking care not to repeat them than we do from contemplation of our successes. We learn from our own errors. The study of what *not* to do is quite as profitable as finding the ways to *do*; the negative virtues must be considered with the positive. Therefore I am hopeful that we may all become wiser men in the future from hearing how we have variously been fools in the past—can steer our respective boats into the deep, smooth, safe water when the rocks and shallows have been pointed out to us. There's no discredit in *having been* a fool, but there is positive disgrace in *continuing* a foolishness after it has been shown to be such. Let us hear from each other of various foolishnesses and so profit by avoidance. Will Robert Ratchet tell us when *he* wore the cap and bells?"

"Most every day, every year, I'm thinking," said Ratchet, rising, with a blush, "at least, up to the organization of the Smithville Jewelers' Trust—for the special form of foolishness which seemed to be mine in embarrassing excess was unloaded after we first met together and I discovered that my competitors were all really good fellows.

My besetting foolishness in the past has been—well, *grouchiness*. I haven't been amiable, good natured, pleasant. No one knows this better than my competitors; for my grouchiness was born, I think, of the notion that my competitor was my particular personal enemy and it was my business to 'knock' him at all times and seasons. I worried nearly as much over my competitors' successes as over my own failures; and in consequence grew sour and cynical. Now, no mood of that sort can be indulged in one direction without its spreading in other directions; and my grouchiness extended, first, to those in my employ, then to my family; finally, to my customers. I forgot how to smile and be cheery, behind the counter; and folks do not like to trade with a disagreeable or unamiable merchant. I reckon the Trust has done me more good than any one of you, in opening my eyes to the great satisfactions which come from more generous judgments of one's competitors. Grouchiness is certainly the most foolish foolishness in all the category."

"I wish it were," said Nicholas 'Necklace; "it would let *my* conscience down a little more softly. What do you think of *me* when I tell you that, up to a few years ago, I didn't pay my bills before they were due when I had the cash lying in the bank, or easily got."

"Do you mean to say," interrupted Mrs. Necklace, "that you didn't make your cash discounts when you had the money to do it with?"

"That's just sadly what!" muttered her husband.

"Pass along the fool's cap—*there's* a head that it will just fit!" rejoined Mrs. Necklace. "But why didn't you?"

"I had a notion," said Nicholas, "that it was important to keep up my credit *at home*—not that I needed the credit for borrowing on, but I fancied that my reputation as a safe and reliable person from whom to buy jewelry depended in some occult way on the balance I carried in bank. Some few years ago I realized that the bank balance was ornamental, but credit for prompt pay to the jobbers and manufacturers was practical—and profitable. I was a fool for a long time before I realized the savings in making the cash discounts."

"I know a fool who once thought it a waste of money to advertise," said Hiram Halfkarat. "I said to him to-night, as he faced me in the looking-glass, 'Well, you were lucky to grow out of your foolishness before the dry rot had eaten up *all* your advertising money.' Of all nonsense there's none quite so generous in length, breadth and thickness as this stupendous foolishness

that 'it doesn't pay to advertise.' Advertising is —."

"Hold on there, please," spoke up a young man whom Solomon Silverplate had brought to the meeting. "I have been asked to address the Trust on the subject of advertising at some future meeting, and I don't want that topic exhausted *now*."

"That's where *you* show foolishness, stranger," rejoined Halfkarat, "you couldn't exhaust the subject of advertising in a dozen meetings—but I'll leave the field virgin for you. Who's next?"

The Treatment of Customers

Henry Hourhand rose, meditatively scratched his chin, and said: "The worst single piece of foolishness that I can recall in my own experience was when I practiced two kinds of manners—one to my rich or well-to-do customers, the other to humbler folks. With the first I put on my best 'company manners'—was as smooth as silk, and polite, and bowed them to the door, and put on all the frills that the book of etiquette taught. I wasn't so particular with the wife of the bricklayer or the milliner's apprentice, but was just touch-and-go business with that class. I got my lesson in time. A young woman, very plainly dressed, came into the store one day to look at some cheap stickpins. She was very slow in making her selection and I was anxious to get back to my desk to check up a lot of bills; so I sort of hurried her along, and when she said she could not find what she wanted but would look around for something cheaper I said, in a provoked way, 'you'd better go to a notion store—we do not handle that sort of trash which you evidently want.' Six months later she married old Bullion, the bank president—and Silverplate, over there, has since sold them goods enough to stock a store. She has never been in *my* store since the day when I failed in politeness to her. It was an expensive lesson, but it taught me to be polite and attentive as possible to *every* customer."

"I haven't a doubt that none of you will dispute my claim to being the champion fool when I began business," said Frank Fingerring, "for I was a price-cutter; and what is worse, I advertised that I would sell anything offered by my *competitors* at a cut price, at 10 per cent. less! The result was —"

"Let's discuss the price question at our next meeting," chimed in Ratchet, "I'm sure we can straighten out some mutual misunderstandings on the subject and do ourselves a lot of good. It isn't a question for the foolish to discuss on All Fool's Day, but is a subject for sane and serious men."

"An excellent topic," said Silverplate, fumbling for a cigar and lifting his overcoat from the pin.

"We never follow the Fashion, the Fashions Follow Us"

MAURICE L. POWERS



JOSH W. MAYER

POWERS and MAYER

beg to announce that their fourth annual exhibition will take place in their offices, between August 13th and 18th, inclusive.

¶ Our last exhibition was acknowledged by all the jewelers visiting same, as being of unusual merit and magnificence. The encouragement received has been so gratifying that we are making special efforts to surpass in every detail the previous exhibits, and assure our clientele that the preparations we have been making the past three months, and shall make the next four months, will disclose a display never before attempted in the "History of Diamond Jewels."

¶ Our monthly announcements will advise you of the progress we are making in the individual character of the goods that will form part of our fourth exhibition.

¶ We always welcome comparison of our quality and prices. Weights of all articles are distinctly marked on all tags—this applies to our entire stock of rich as well as inexpensive Diamond Jewelry. In welcoming comparisons, we do so to show that our prices are as reasonable as is consistent with the renowned standard of quality and workmanship of our products.

POWERS and MAYER

Makers of Diamond Mounted Jewels THAT SELL

258 and 260 Fifth Avenue

NEW YORK

"We are always pleased to ship goods on memorandum"

Upon receipt of Postal Card request we will mail you our New Diamond Calculating Table

The Argumentative Advertisement

THE evolution of advertising from its crude and characterless form of twenty years ago to the argumentative and convincing publicity of to-day is an interesting illustration of the rapid rate at which "things do move" in this twentieth century. It is a far cry from the modest little card of "John Jones, watchmaker and jeweler," to the virile announcement of the time, which not only illustrates and describes the stock, but tells the how, the why and the wherefore, educates and protects the public, exposes fakes and trade parasites, attacks unscrupulous competition and appeals in convincing argument to the intelligence, self-interest and local pride of the people. The modern jeweler is learning to use his advertising space not only to exploit his stock but for a systematic campaign of education of the kind that a self-interested community cannot, in justice to itself, ignore. Note, for instance, the following newspaper announcement of Jeweler S. M. Strain, Nokomis, Ill.:

The Jewelry Graft

In these days of graft the jewelry and watch business have been made one of the strongholds of the grafters. Did you read of the fellow who has in five years made an independent fortune by selling graft watches and jewelry through the U. S. mails? He offered a twenty-year case and a seven-jeweled movement for \$9.98, and others in proportion. The great American public "bit," and when the watch came to you it looked just as good as any, but after a few months the "stuff was off," and then came the "rub." The watch was taken to the local jeweler to get a new case "on the guarantee." The jeweler informed the EASY MARK that there was no mark in the case to tell who made it, consequently there was no way to get a new case for it. Then the case was sent to the fellow from whom it was purchased; the reply came back that the company that made the case was not in existence, consequently no new case. The works were a very poor Swiss that cost about \$1 to make, and the "steel parts" were the very softest kind of iron, which would wear out with six months of constant use.

Now there are grafters near home who advertise to sell you watches very cheap, but they don't have them in stock and manage to sell the patrons a good one at a reasonable price—the cheap one being only a bait to attract the person to the store.

We do not practice any underhand methods in our business, and you can always depend on us having what we advertise.

Watch this ad.; we are gathering material for an expose of the jewelry graft that will show you where "we are at" in the matter. We expect to prove our undisputed title to our reputation, "The Reliable Jeweler."

Yours for the good of your own, and our own purse.

STRAIN,
Nokomis.

There's quite enough meat in this announcement to make the local public continue to "watch this ad." for further information and warning, to the great benefit not only of Mr. Strain, but of all his trade brethren. Not all the jewelers have yet realized the full

potentiality of the four or eight-inch space which they purchase in their local papers. Properly used, it affords the one effective means of exploitation and protection for the trade. With local organization and unity of action among the craft, there is no real grievance which could not thus be successfully combatted.

Fixing Prices for Repairs

ONE of the pressing questions to be given attention by local associations is the matter of repair charges. Jewelers inform us that this important source of revenue has become much demoralized in recent years owing to the severe competition and consequent paring down of the regular charges for bench work of all kinds. "One of my competitors here," says a Kansas jeweler, "advertises 'watches cleaned for 50 cents'! It is such charity workmen as this that ruin our bench business." There is much truth in the assertion of our subscriber that "the worst enemies of the trade are right in it." In present conditions, when prices and wages are advancing and unusual prosperity prevails in the land, there can be no justification for price-cutting on repair work. If the jeweler of to-day makes a higher percentage of profit on goods sold than he did ten years ago, he should make a proportionately increased profit on bench work.

It may be added that the advertising of cut charges for repair work is a form of publicity greatly to be regretted. Even for the cutter himself it is short-sighted policy, for while he may temporarily attract some extra trade, he must ultimately share in the demoralization that he himself has created. We recognize that it is difficult to discipline such a refractory brother as this, but it is much better that the other members of the trade in the town should combine to uphold prices than that they should severally follow his bad example.

AN Illinois subscriber writes: "We jewelers in this town are fairly friendly with one another and have been considering your suggestion of getting together and adopting a rule of conduct in the matter of prices, etc., but it seems as if we would have trouble in fixing on a list of repair charges. We have probably a population of 18,000 in our town at present, and seven regular jewelers, all carrying more or less stock. Can THE KEYSTONE suggest a list for us?" The fixing of a price-list of repairs is pre-eminently a task for the jewelers themselves, who are thoroughly acquainted with the prices now charged and how they suit local conditions. The cost of labor, too, which varies

in different sections is an important consideration in compiling such a list. The best we can do, therefore, is to reprint a list of repair prices used by a local association under conditions somewhat similar to those mentioned in our subscriber's letter. This list is as follows:

Balance staffs for 7 to 15-jewel movements	\$2.50
Balance staffs for 17-jewel movement	3.00
Balance staffs for 21 to 23-jewel movements	3.50
Cleaning key winders	1.00
Cleaning stem winders from 7-jewel up	1.50
Lift spring	1.00
Catch spring	1.50
Crystals	.25
Jewels, cock or foot	1.00
Cleaning clocks	1.00
Cleaning nickel alarm clocks	.50
Cleaning French clocks or regulators	2.50
Mainsprings for 7 to 15-jewel movements	1.00
Mainsprings for 17-jewel movements	1.25
Mainsprings for 21 to 23-jewel movements	1.50
Hands, each	.25
Nickel bows	.25
Silver bows	.50
Filled bows	50c. to 1.00

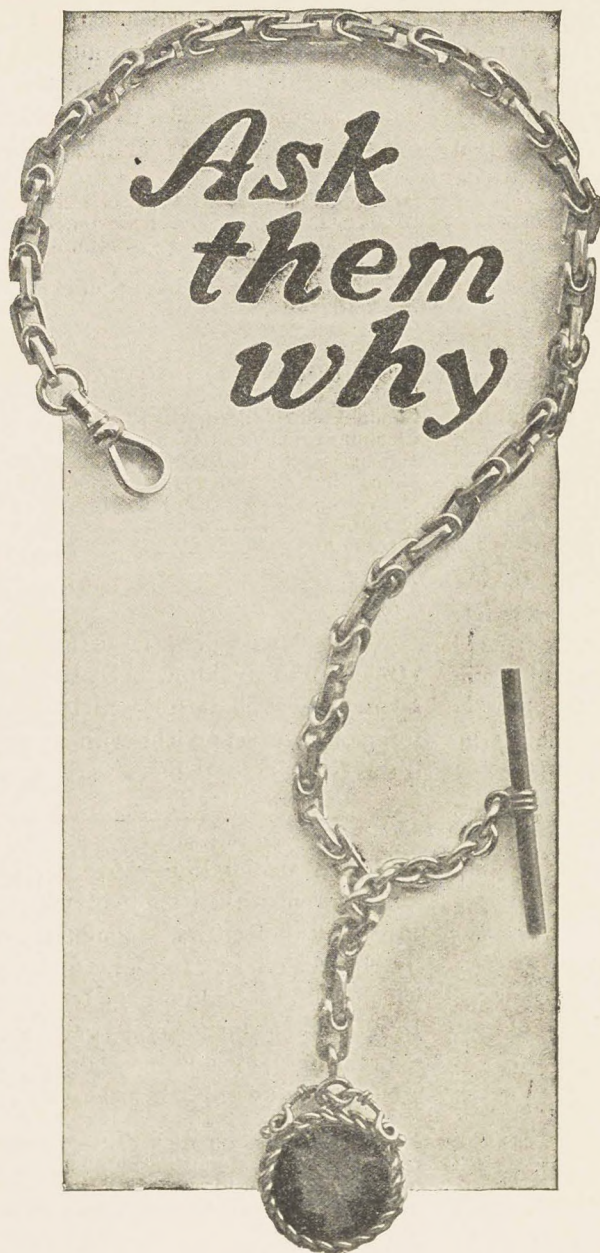
The above will serve at least as a suggestion and may form the basis of an agreement. We will be pleased to hear further from our correspondent with a copy of the list as finally adopted.

SINCE writing the above we have been favored with a copy of the "Uniform Price-List of Repairs," compiled and issued by the American Horological Society, and which will be found on page 649 of this issue. In re-echoing the general complaint referred to of the unreasonably-low charges for repairs, a circular issued by the society says:

Almost three-quarters of the jewelers (watch repairers) depend on bench work as the main income in their stores, and if you consider how much skill is required to become proficient, the number of years of practice in order to become a first-class workman, and what an expensive kit of tools the jeweler must have to do the run of work as it comes to him from the customers, and also consider how few are the years after becoming competent, wherein he is capable of his full earning power in the trade—it is often hard to understand why some people would do work at prices that are too low.

In the last five years the prices for all commodities have increased in the average of fifty per cent. The labor unions have raised the prices of work correspondingly to make up for the increase in the cost of living, but the jeweler has not participated in anything because he looks at the next jeweler as his worst enemy and, therefore, gives the dear public a chance to prevent him making a fair profit on his labor.

A local association and such an agreement as above suggested seems to be the only remedy for this anomalous condition. We fear it is true, as the circular states, that the jewelry trade have been reprehensibly slow to take advantage of the prevailing upward movement in prices both for goods and work done, and the fact does not speak well for their business acumen or progressiveness. The time is salutary, however, for a general stiffening in bench rates, the only obstacle in the way being disunion or antagonism amongst local competitors.



PRACTICALLY four-fifths of the jewelers in this country carry Simmons Chains.

Among these thousands of dealers are many of the largest, most progressive and most successful retailers in the trade.

Ask these men why it pays to handle the Simmons line—why they continue to carry Simmons Chains year after year.

Ask how it is that Simmons Chains are more widely known than any others; ask if the advertising that has been, and is being, done for Simmons Chains has helped, and is helping, their sale—if the Simmons co-operative plan of advertising really brings tangible results.

Then ask yourself if it wouldn't be worth your while to show a really representative assortment of the Simmons vest and lorgnette patterns this coming season.

You can get a first-class selection from almost any prominent wholesale jewelry house—East or West.

R. F. SIMMONS COMPANY
Main Office and Works, ATTLEBORO, MASS.

Salesrooms: 9-13 Maiden Lane, New York. 103 State Street, Chicago

The Feldspar Group of Minerals^{*}

As Treated in the Jewelry of Forest E. Mann

By IRENE SARGENT

Contrary to the custom governing the present series of articles, we treated, in our Easter number, the work of a company of designers employed by a great corporation. We now return to consider a single artist who both conceives the idea and gives it material shape; that is, a workman of the old order of things, who is content to produce in limited quantity, in order to obtain the higher satisfaction of realizing in each object something definite and distinctive, something which makes it representative not only of the maker's standard of skill, but also of some special mood into which he once entered, and which can never be repeated for him.

Within this class of producers we have chosen one who offers much interest from several different points of view; principally because of his work as a goldsmith, but also because of his influence as a clear-minded, capable instructor, and again, to a minor degree, by reason of his personal history.

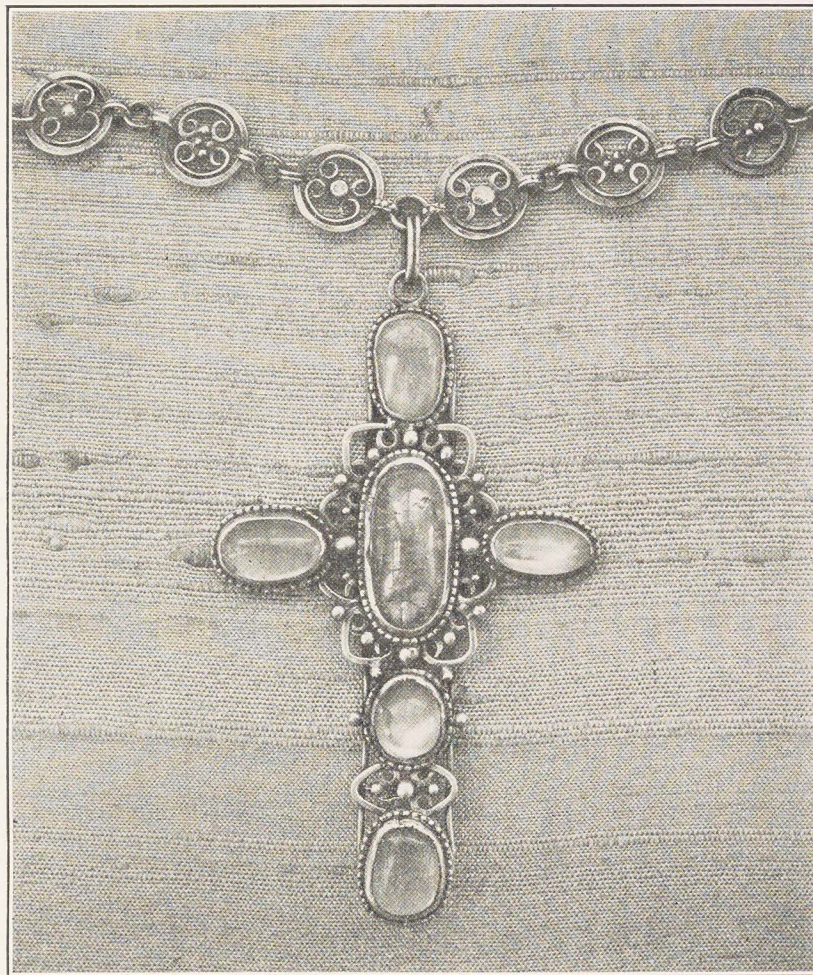
A glance at the objects which we have chosen from his productions for illustration in no wise enlightens one who would seek to know their maker; for the style and quality of the work disguise, rather than reveal the worker, whom, were we not assured otherwise, we should picture as a European. Not an Austrian certainly, since he is without vagaries suggestive of Oriental forms and decoration. Nor yet a German, since with him heaviness of effect is no persistent mania, but a quality which, when present, has abundant reason for being. Neither could he belong to the English group of "arts and crafts" jewelers, because he shows no fondness like theirs for light tracery in settings, and for delicate ornaments pendent from slender chains. But we might imagine the worker to be a young Frenchman turning aside distastefully from the nihilism of *l'art nouveau* to study the crude, assertive beauty of that period when the Romanesque was becoming the Gothic.

But the testimony as to nationality is in this case deceptive; study and personal preference being alone responsible for the results. The designer and goldsmith represented by these objects is an American of the extreme east of the United States, who has acquired rather than inherited the use and mastery of specialized artistic principles.

Mr. Forest Mann, the subject of our present sketch, is a native of Maine, a state which has contributed largely to the advance-

ment of American art and literature; having produced numerous sculptors, painters, and poets, distinguished almost invariably by a fine sense of the historic, which, far from making them servile imitators, has served simply to quicken their imagination, and to give them the power of expressing their own ideas with force, clear-

ness, and charm. A notable case in point is that of Longfellow, some of whose finest imagery is due to his subtle understanding of the spirit of Gothic art. And again in the well-known marble relief group, "Death Staying the Hand of the Sculptor," Daniel French, a native of New Hampshire, has treated his theme with a truly Greek emphasis and dignity, although he has completely preserved his treatment from the deadening influence of the academy. To attempt to account for these facts would be idle, but, as beauty and pleasure are coveted in proportion that they are remote, it may be that the austerity of the pine forests leads the highly imaginative of this northeastern region to idealize all that pertains to the life of the city, and particularly to cherish the fine arts as attaching to the highest development of that life, just as the most advanced type of the city-dweller turns with longing to the call of a simple and even primitive existence.

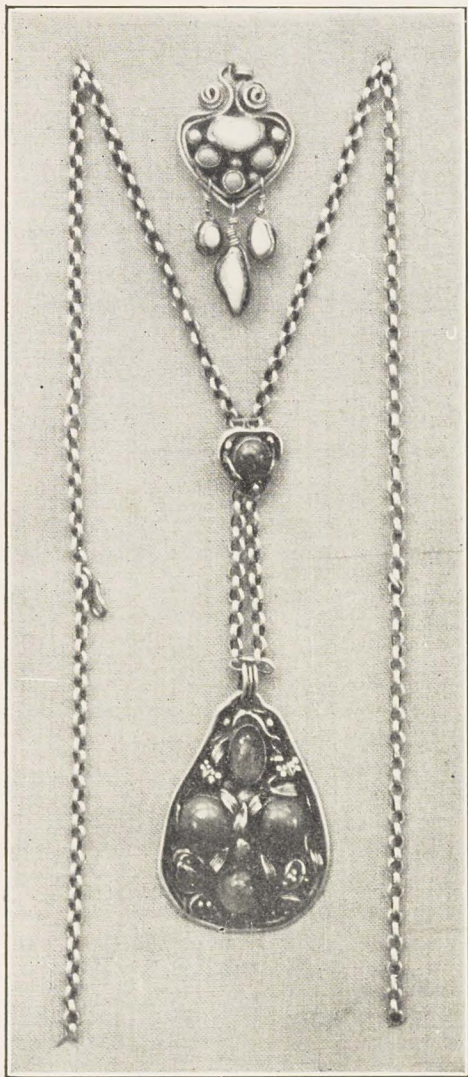


Cross: Tourmalines and Moonstones

But whether we see in these facts the restlessness of man's nature, or the power of the law of contrast, they are equally interesting; while the artistic creations of isolated workers proceeding as if they labored surrounded by companions, and in an atmosphere heavy with traditions, have always the charm of mystery.

As there is fast coming to be no question of little or great between the fine and the industrial arts, particularly since Lalique has raised the goldsmith's craft to the dignified position which it occupied during the Italian Renaissance, it is certainly not trivial to give to objects of personal adornment the same attentive, if not the extended criticism which we should have formerly reserved for the picture, statue, or poem. Especially are the objects which we are to examine worthy of study, because they have a strong flavor of the mediaeval workshop, and because they possess, through their display of conventionalized natural forms, something of that beauty which runs through the illuminated manuscripts so patiently wrought by the monks centuries ago, in the seclusion of the cloister.

Therefore, confident of employing well our time and thought, we may pass to this attractive task, only first pausing to note



Pendants: silver, set with pink corals and baroque pearls

briefly certain facts in the history of the designer and workman with whom we are concerned.

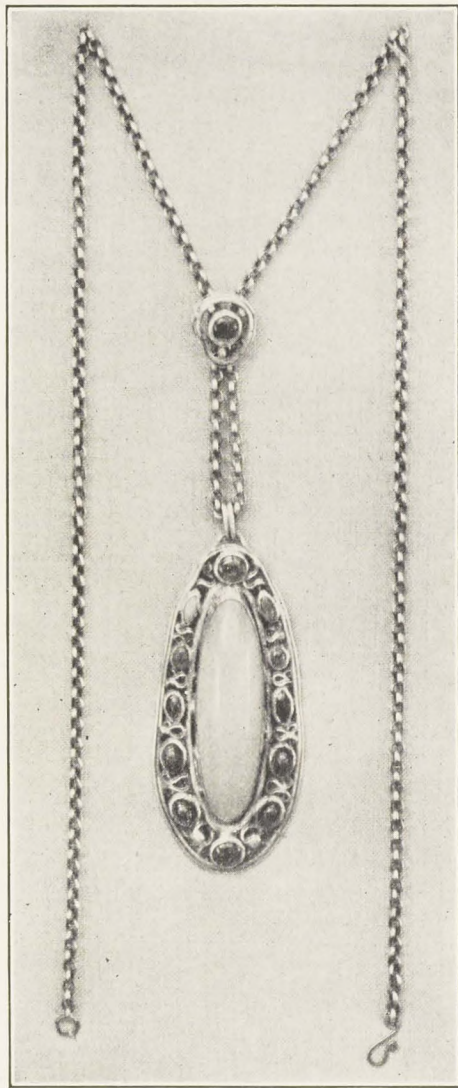
We must above all refer to the thorough training possessed by Mr. Mann, and gained by him at that excellent school of industrial art, the Pratt Institute of Brooklyn, where he was brought under the influence of those liberally educated artists, Mr. Arthur Dow and Mr. Fenollosa. Having finished his chosen course with marked success, he became a teacher as well as a worker; in the former capacity first holding connection with the Chautauqua School of Arts and Crafts, and then becoming chief instructor in a similar institution at Dayton, Ohio. From the second position he passed to his present office as director of the Society of Arts and Crafts of Grand Rapids, Michigan, under whose auspices he teaches classes in design, composition, and technical processes; the latter

including those employed in pottery, as well as those peculiar to metalsmithing.

Furthermore, unlike the majority of practical workers, Mr. Mann is quite successful as a speaker upon art subjects; since he frequently delivers—and always acceptably to his hearers—two lectures which would appear, from the extracts given by the press, to contain material of the greatest importance to the student. This statement is especially true of the lecture entitled “The Language of Line,” which is based upon the author’s extended comparative study of the arts of all peoples, ancient and modern, barbarous and civilized. But it is to be regretted that the second lecture, also direct and plain in its appeal to the people, should have received the strongly *Ruskinian* title of “Vessels Unto Honor”; the subject matter presenting the artist-craftsman as he appears in successive periods as potter, metalsmith, enameler, worker in stained glass, or woodcarver, while the title with its Biblical suggestion is quite as enigmatic as Ruskin’s “Unto this Last,” which announced a socialistic argument under an obscure allusion to the parable of the laborer, who, coming into the vineyard at the eleventh hour, received his penny alike with his companions, who are the



Locket-pendant: antique silver, set with amazonstones



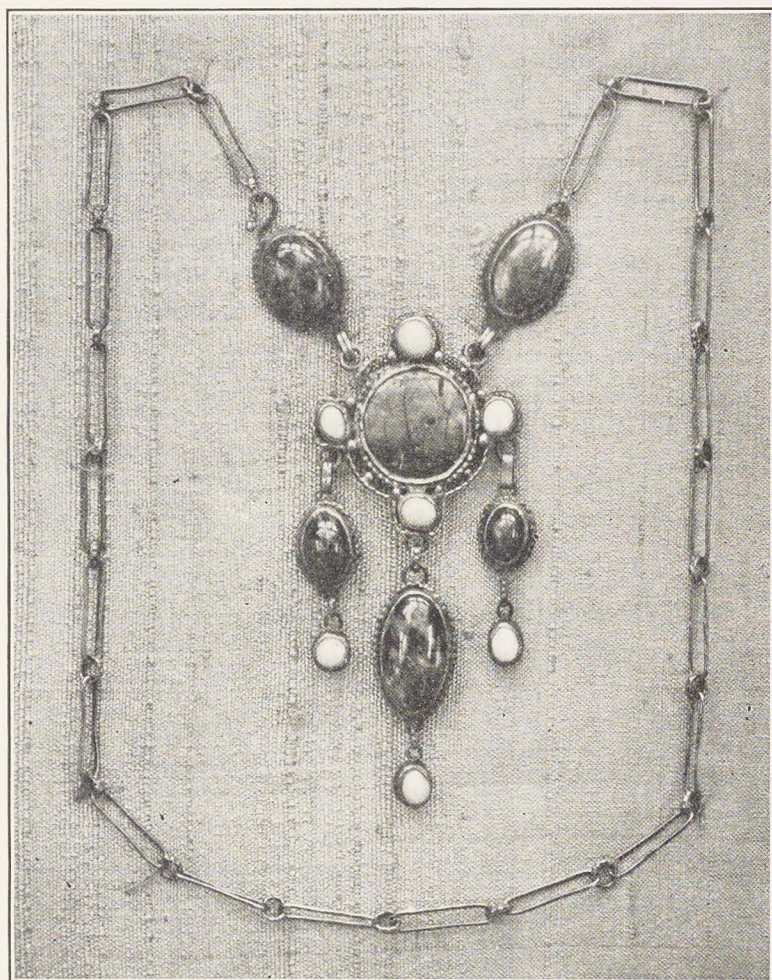
Pendant: silver, set with jade and opals

bearers of “the heat and burden of the day.”

This criticism of a title is perhaps too trivial to enter into an article which in justice can not be other than a tribute to the excellent and serious work of Mr. Mann as both artist and teacher. But the slight stricture is made simply as an earnest protest against a form of affectation which the admirers of the nineteenth century English arts and crafts movement follow too easily and to their own detriment, as well as to that of the cause which they represent and champion.

The lectures given by Mr. Mann, in accordance with the modern system which recognizes students as “eye-minded,” rather than “ear-minded,” are thoroughly illustrated by lantern slides, and in some cases, are followed by demonstrations of processes in the crafts of which they treat. They meet the warm approval of educators, while at the same time, they are most interesting to those who

Instructive
Art Lectures



Pendant: silver-gilt, set with labradorite and California pearls

wish to gain a sound basis for judgment in subjects pertaining to art.

Alive to the crying need of forming in America an appreciative and intelligent public, Mr. Mann deals in his lectures with principles to the exclusion of narrative and of rhetoric; proving his statements step by step, and evolving the complicated developments from the simplest of beginnings: as, for instance, taking as a basis the arrangement of a few units of design into a border or panel, he shows the observance of the same laws of rhythm, balance, contrast, and harmony to be the cause of beauty in some great work of architecture, or famous pictorial composition. For such a method of instruction Mr. Mann deserves much credit. It is one difficult to pursue, owing to the heavy demands which it makes upon the time and thought of the teacher who would bring it to a state of perfection such as to warrant its presentation in public. But the instructor in art criticism or art history who teaches his students to observe and to compare, exactly as if they worked with specimen and microscope, will have his own reward; since proofs will not fail him that he is aiding to form a class quite as necessary as the producers of art themselves to the progress and the economic prosperity of the people.

As a Creative Artist

The few preceding indications will serve to note the earnest quality and the effectiveness of Mr. Mann as an instructor whose influence is widely felt in the Middle West. It now remains to treat of him in his most interesting phase, as a producer of beautiful objects of metalsmithing.

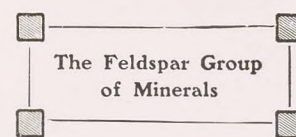
In examining these objects we feel at once that the technical skill of the maker is supplemented by exceptional knowledge

of a kind to be gained only through study in foreign countries. The ornaments are visible memories of museums and sacristies, necessarily affording keen pleasure to the eyes of those who have traveled, and also attracting those for whom they have the charm of things unseen before. Many of their characteristics show the admiration of their maker for the twelfth and thirteenth centuries, as Mr. Mann acknowledges in an allusion to the opportunities which he has enjoyed for the historic study of his art; but even earlier influences have left their traces in this metalwork, which recalls the massiveness of the period of Charlemagne, and indirectly the Visigothic crowns and crosses preserved in the Cluny Museum, Paris.

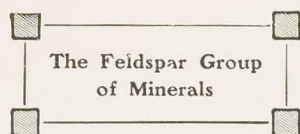
Like all other members of the new school of jewelers, Mr. Mann chooses his stones not exclusively, or even largely among the four ranked alone as precious by Benvenuto Cellini, but widely among the semi-precious, or yet among hitherto neglected decorative minerals; being sure only to obtain the color effect, or the luminous point which he desires, in order to complete his scheme. He can even be imagined as going to the length of Lalique himself, who does not hesitate to use the red garden pebble common in France, whenever its tone and texture can add beauty to the work.

The Artist's Use of Gems

In the choice of stones, the old goldsmith was greatly restricted, when compared with his successor of to-day. To produce his contrasts or his harmonies he was often forced to employ *smalto*, or vitrified paste, such as we see in the transparent red substance set in the large votive crown in the Cluny Museum. Then, he often obtained his deep, rich colors by the half globular form of his gems: a cutting, or rather, lack of cutting which we now call *en cabochon*, as



Locket-pendant: amazonstones and California pearls



distinguished from the faceted gems, whose numerous planes provide a complicated play of light.

The modern jeweler, like Mr. Mann, builds his harmonies from an extended keyboard. He can select color notes grave or acute, he can sharp or flat them at will, or alter their quality of brilliancy or of softness. He is able to do all this, because the products of both old and new world mines are at his disposal, and because mechanical device has so perfected the cutting of stones that he may adapt his effects to the theme chosen. As a result of this development it is not unusual for the artist so provided with resources, to present a more or less well defined picture in a bracelet, brooch, or corsage ornament, as we have already seen in the course of the present series of articles, notably in the case of Mr. Lawrence, or of Mr. Thresher. As for Mr. Mann, however, he seeks purely decorative results, and he seems to prefer gems characterized by their lustre or—as the expert mineralogist, Mr. Kunz, names this quality—their “chatoyancy.” So we find him choosing beautiful individuals from the feldspar group, such as the amazonstone, the labradorite, the jade or nephrite; while he reaches his highest color notes in the more familiar tourmaline. Of these four minerals two at least, although well known to scientists, are yet so infrequently used as ornaments that to devote to them a word of description can not certainly be amiss.

Feldspar Group of Gems

The first of these, the amazonstone, varies in color from a bluish gray to blue-green, beside running a gamut of shades from that of the most delicately blanchd leaf-bud to a deep apple-green. In our own country, it



Comb: dull silver, set with baroque pearls

is found from Maine to California, and when it was first shown in Philadelphia, at the Exposition of 1876, it occasioned much surprise, especially on the part of the Russian gem merchants, who had brought with them a number of small crystals of the same mineral, which they valued at what would now be regarded as fabulous prices. The amazonstone in beautiful specimens is used by Mr. Mann in several pieces here illustrated; notably in a locket-pendant and a similar fob, where it appears in connection with California pearls, and set in pierced work showing flower-and-leaf patterns, some of which are modern treatments, while certain others resemble the stone tracery of Gothic capitals.

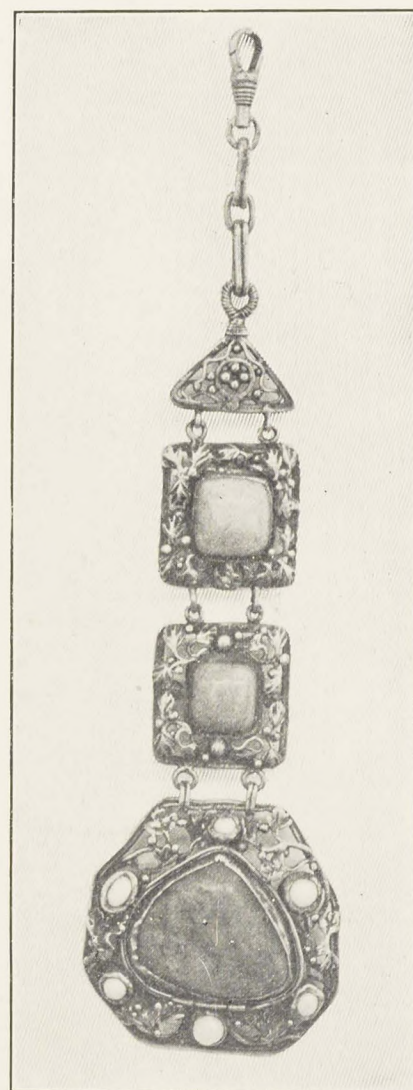
The second of the two unusual stones is the labradorite, a lime-soda product of the feldspar group, noticeable for its brilliant change of colors, and possessing a blue lustre or “chatoyancy” as its most permanent effect. This mineral is effectively employed by Mr. Mann in the silver-gilt necklace and pendant, where it occurs in large pieces grouped in a pleasing figure, and accented by the lighter sheen of California pearls.

The Beautiful Jade Stone

Another illustration shows a stone familiar to all lovers of Japanese art, but rarely occurring in objects intended for personal ornament. This stone commonly called jade, offers two varieties; the one often serving as material out of which savage peoples of the Far East fashion their weapons; the other, more properly jadeite, being translucent instead of opaque, and presenting a scale of delicate color, beginning with light cream and rising to shades of the soft gray-green seen in the stems of carnation pinks. In the ornament here illustrated Mr. Mann has surrounded his long oval of jadeite with opals isolated by sufficient space to permit each little gem to kindle and burn its personal flame of red, of green, or of blue.

A distinctive piece of work, regarded both as to its form and as to its exquisite effects of lustre and light, occurs in the large cross set with tourmalines and moonstones. In this instance, the metal tracery is most clever, since it presents no assertive design to overpower the vapor-like translucency of the gems.

In examples of this kind Mr. Mann attains his best results and shows that subtle feeling for luminosity which is characteristic of the greatest masters in painting. It is to be hoped that he will foster to the utmost this rarely-possessed gift.



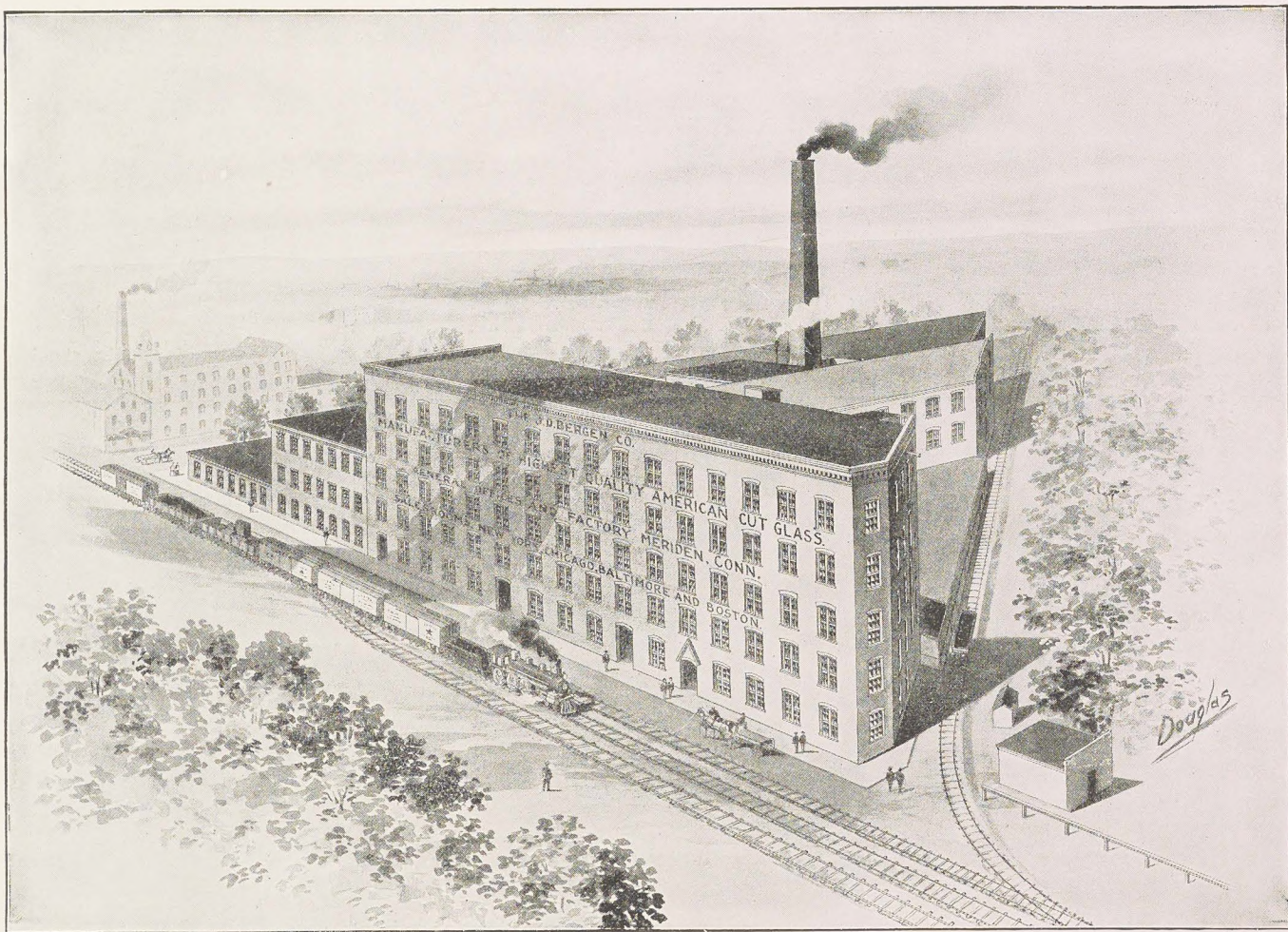
Fob: silver, set with amazonstones and California pearls

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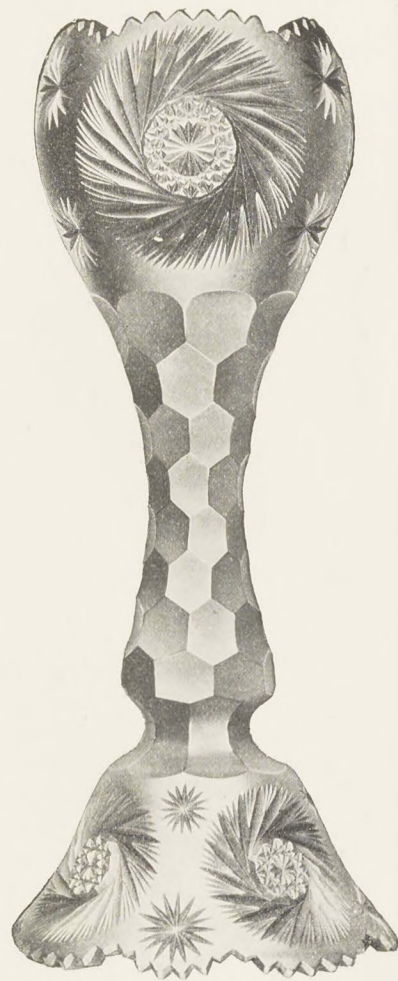
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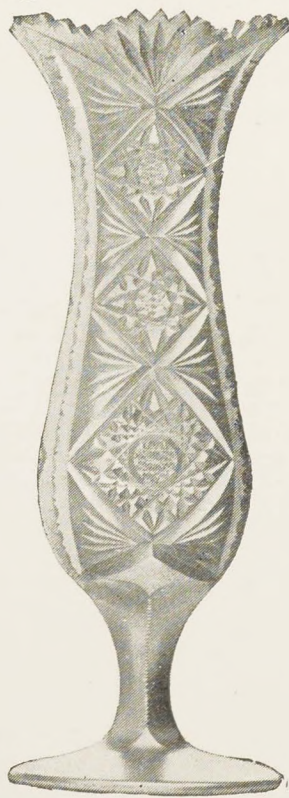


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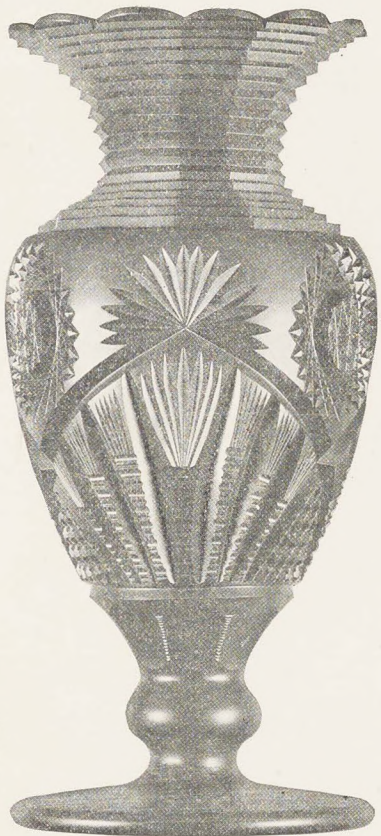
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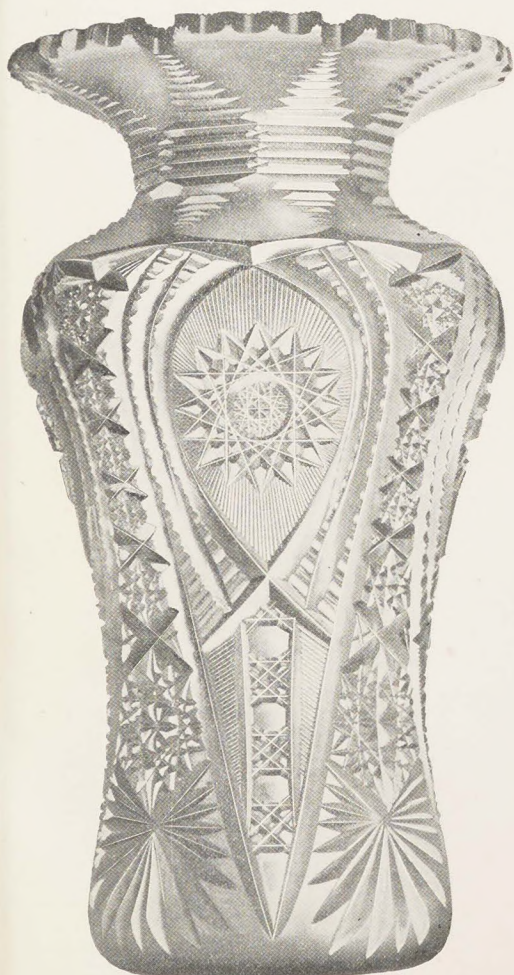
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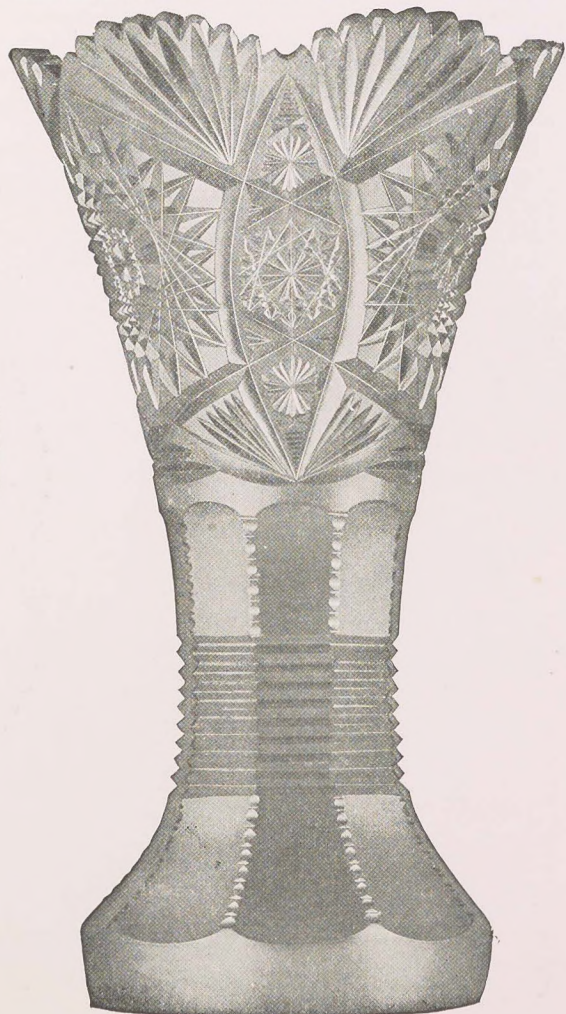
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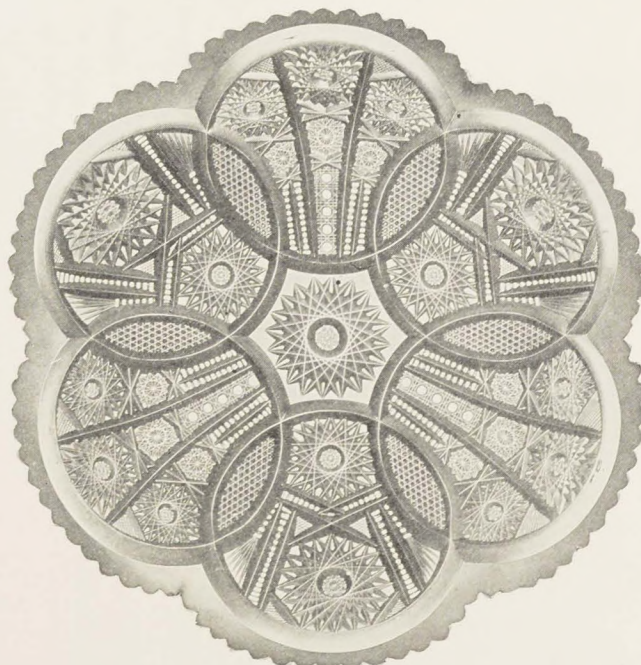
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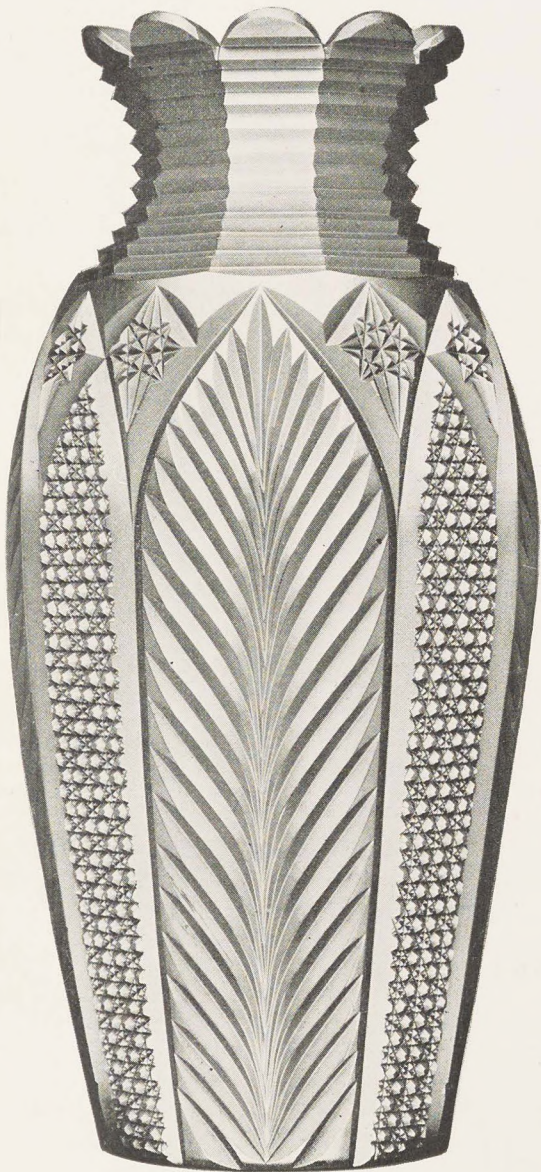
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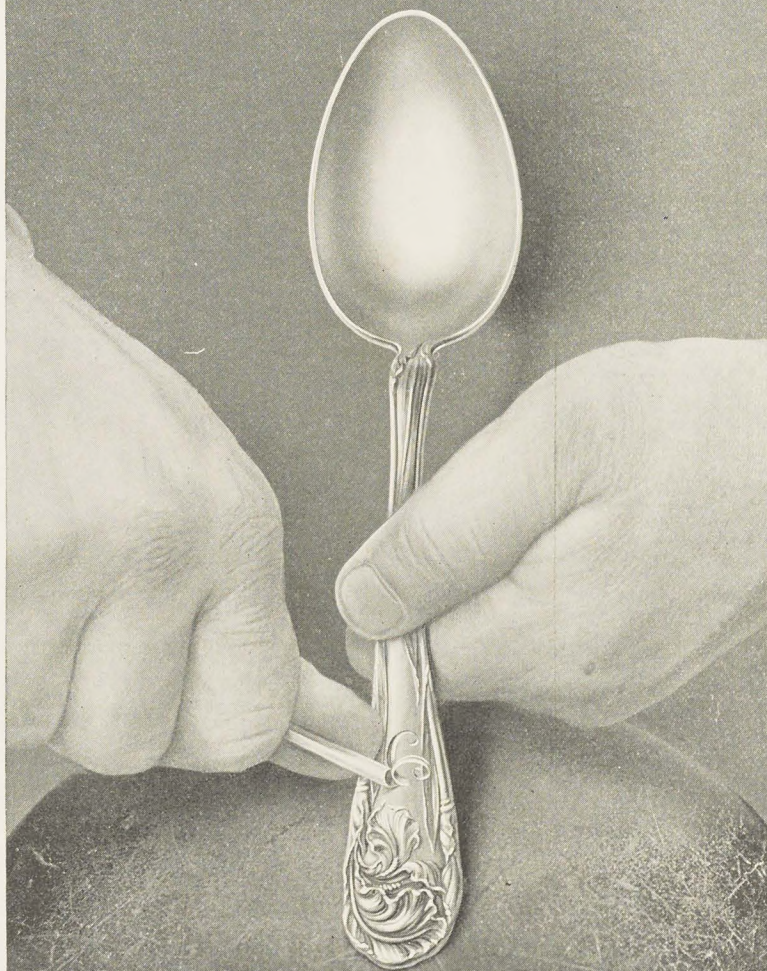
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"There was one issue of the flying-eagle cent that is now very scarce, and coins in fine condition bring as high as \$15 apiece. These are dated 1856.

"It was in this year that the design was first introduced, and a small number of the cents were minted as pattern pieces and given to members of Congress and other government officials. But the issues of 1857 and 1858, when their coinage was stopped, were turned out in immense quantities, and they are worth but little more than face value.

"Another example of the way in which people hang on to certain issues is that of the 'V' nickels of 1883, 'without the cents.' Of course, the omission was an oversight at the mint and the government tried to get the coins back, and this fact caused lots of people to think that some day these coins would surely be worth a large premium. Ever since they have carefully hoarded each one that has come into their hands.

"One man has even gone so far as to try to corner the market in these coins. He already has over a thousand of them, and he buys all he can. He argues that after he gets hold of a great number of these nickels, people who are collecting will have to come to him for them, and he can charge what he pleases. This man will have his hands full before he does this, for there were 1,000,000 of them originally issued.

"There are many people who have from ten to a hundred of these coins, patiently waiting for a rise; but I'm afraid

they'll be disappointed like those who bought up all the trade dollars they could get at 85 cents. There is one man out West who now has 3000 of these dollars, and is still buying.

"The 1883 nickels now command no premium whatever, and yet it has been over twenty years since they first came out. In the case of the trade dollars, they are worth even less than they were, and their price seems to be steadily decreasing, as they rarely fetch more than 55 cents, and never more than 60.

Three and Two-Cent Pieces

"It's the same way with the majority of the old silver three-cent pieces, the nickel three-cent pieces and the bronze two-cent pieces. Very few of them are worth more than face value.

"Columbian half dollars of 1893 are worth just face value and not a cent more. The Columbian half dollars of 1892, of which a limited number were coined, bring a slight advance, but never more than 55 cents total value. The Isabella quarters are the rarest of the Columbian issues, and one of them in unused condition will fetch 75 cents.

"Another coin issued in recent years that at first was thought to be a good chance for speculation was the Lafayette dollar, issued to commemorate the unveiling of the Lafayette monument in Paris in 1900, but they are worth only \$2. The government mint made 50,000 of these coins and turned them over to the committee in charge of the monument in this city at \$1 each, the premium to be devoted to the building of the monument.

"It's a hard thing to make a fictitious value for a coin, and this is clearly shown by the Louisiana Purchase Exposition's issue of Jefferson and McKinley gold dollars.

"These were the first gold coins to bear the portraits of United States citizens, and their issue was limited. The original price was \$3, but the prospects are quite rosy for the exposition to have a large number of the coins left on its hands, as the general public is not at all enthusiastic over paying \$3 for a

gold dollar, and the coin collectors pay no attention to them whatever.

The Stella Four-dollar Gold Pieces

The only coin issued by the government during the past fifty years that commands a really high premium, with the one exception of the 1856 cent, is that known as the Stella four-dollar gold piece. This coin also was nothing more than a pattern piece. It was made at the United States mint in 1879 and 1880.

"Only a limited number of them were coined, about 600 in all. They now bring from \$40 to \$55, according to state of preservation.

"People will, no doubt, be surprised to learn that a specimen of the ordinary bronze cent of 1877, in especially good condition, brings as much as from \$1 to \$1.50. They command a premium, no matter what is their state of preservation, but their value doubles and trebles when they show little signs of wear from circulation. There are a good many cents of this date still in general circulation, if one will keep a lookout for them.

"The coinage of all the smaller denominations was quite limited in 1877, and nearly all of them bring fair premiums. A nickel three-cent piece of that year is worth \$3 to a collector, whereas the other dates fetch only a few cents. Nickel five-cent pieces of 1877 bring from \$3 to \$4. —New York Sun.

Wore a Diamond Necktie

The appearance of a pale-faced youth wearing a diamond necktie, at the reopening of the Empire Theater, in London, on October 19th, created a scene that has never been paralleled in the stalls of a London theater, and resulted in his removal from the building. The tie was a resplendent affair, made in the shape of the conventional evening bow, but it was composed of large, white diamonds.

The young man was otherwise a walking diamond mine. His hands were covered with jewels, and his cuff links, shirt studs and waistcoat buttons were all blazing stones. At first the audience maintained its good manners, merely raising its eyebrows as the bejeweled youth passed, but later hundreds of persons followed him about the promenade. He finally took refuge in a seat near an exit, where the attendants of the theater, fearing that an attack might be made upon him, guarded him.

The laughter, cheers and jeers destroyed the attraction of the stage, and order was not restored until the youth was escorted from the theater. It is believed that the young man was either engaged as an advertisement or was paying a wage.

TRADE-MARK
REGISTERED

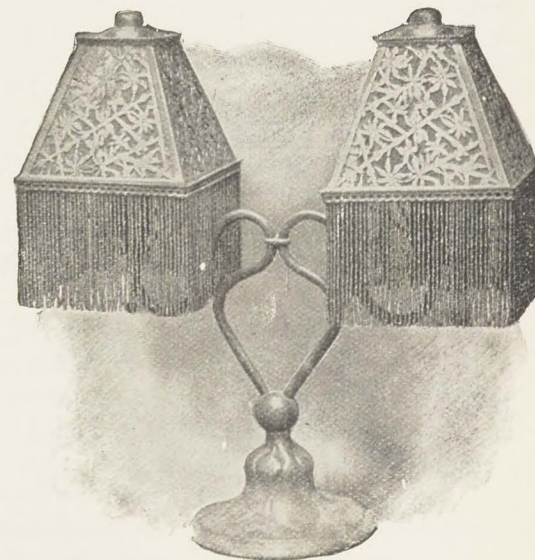
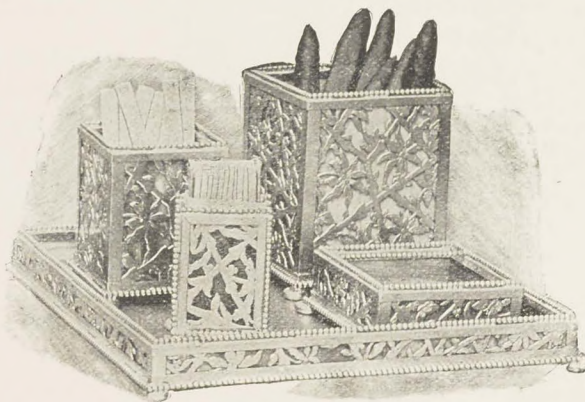
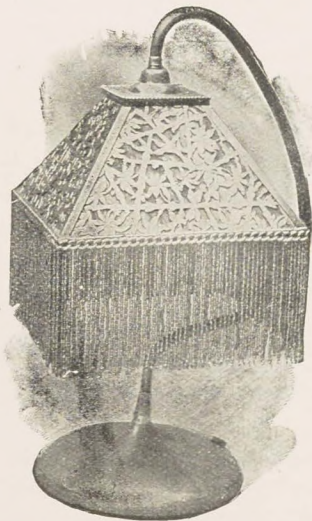
SEAMLESS GOLD RINGS



Our registered trade-mark in a ring is guarantee that we have given expert attention to every detail of its manufacture; also that we can and do assume the responsibility that its quality, shape and finish are the very best. All our rings are made from solid gold discs and by our own special machinery.

Catalogue and Ring Blank on request

HAYDEN W. WHEELER & Co.
RING MAKERS
TWO MAIDEN LANE, NEW YORK

TRADE-MARK
REGISTEREDTRADE-MARK
REGISTERED

ELECTROLIERS

THE LATEST ADDITION

TO OUR LINE OF "METAL AND GLASS" AND COPPER
MAKES THIS THE MOST ARTISTIC DISPLAY EVER OFFERED TO THE JEWELRY TRADE
FINISHED IN "VERD ANTIQUE," BRASS, BRONZE, ETC., ETC.
MADE IN THE "APOLLO STUDIOS"



WORKS:
4-6 MARION STREET
187-189 ELM STREET

APOLLO SILVER CO.

BERNARD RICE'S SONS

542 BROADWAY, NEW YORK



New York Letter

High Tide of Gem Imports

Another remarkable record in the importations of pearls and precious stones was made by the recent month of February,

the volume for which surpassed in value by almost six hundred and sixty thousand dollars that for February, 1905, the next highest corresponding period on record. This grand total specifically amounted to \$3,067,036.20, and was made up of \$1,999,475.95 worth of cut and \$674,123.64 worth of uncut stones, making an increase in both varieties over the imports for the same month of the previous year, the increase in the uncut class being, however, much more pronounced. This practically-continuous growth in the importations of precious stones, so far as it can be considered an index to general business conditions, is a most reassuring omen. How general must be the prosperity and firm the confidence of the country when merchandise so proverbially high priced and solely ornamental in character is in growing demand! And the phenomenon is still more significant by reason of the prevailing preference for high-priced gems reported by most dealers. The classified imports for the month of February of the past four years are as follows:

February.	Cut.	Uncut.	Total.
1905 . . .	\$1,732,965.39	\$674,123.64	\$2,407,089.03
1904 . . .	1,170,436.85	637,943.02	1,808,379.87
1903 . . .	1,036,783.32	646,577.19	1,683,360.51
1902 . . .	1,023,154.32	434,177.36	1,457,331.68

Jewelers' Board of Trade

At the meeting of the Jewelers' Board of Trade, held on Thursday, March 8th, the following were admitted to membership in that organization: American Oil & Supply Co., Newark, N. J.; Baldwin, Miller Co., Indianapolis, Ind.; G. P. Engelhard & Co., Chicago (associate); Furbish, Swift & Fisher, North Attleboro, Mass.; Victor Jonest, New York; Robert Levy, Newark, N. J.; Edwin D. Washburne & Co., New York; the Williams & Anderson Co., Providence, R. I.

Proposed Bankruptcy Legislation

O. G. Fessenden, of Hayden W. Wheeler & Co., president National Association of Credit Men, and D. L. Safford, secretary of the Jewelers' Board of Trade, of this city, were among a deputation representing various commercial bodies, which appeared before the judiciary committee of the House of Representatives at Washington, on Friday, March 2d, and expressed their views regarding the proposed bankruptcy legislation. All of nine proposed bills designed to repeal the existing law, were unitedly opposed by the delegates; who, however, were equally united in favor of the Palmer bill now pending in Congress, and whose salient provisions seek (1) to check the discharge of dishonest debtors, by putting into the hands of creditors new and available objections; (2), to make it more easy to punish commercial criminals in the federal courts; (3), to meet criticisms growing out of too liberal

allowances now made to receivers; (4), to widen the law as to insolvent incorporations. President Roosevelt was interviewed by the delegation, and, having heard their arguments, promised to carefully consider the matter should it come before him at any time.

The Jewelers' Security Alliance

The regular monthly meeting of the Alliance was held on March 9th, the following members being present: Chairman Butts, Vice-President Champenois, Treasurer Karsch, Secretary Noyes and Messrs. Abbott, Alford, Bowden, Brown and Stern, of the committee. The following new members were accepted:

Jos. J. Buser, Freedom, Pa.
R. P. Jahnke, Gonzales, Texas.
I. Lewkowitz, New York City.
Nosher & Gwynne, Newark, N. J.
Geo. Becker & Co., Providence, R. I.
J. J. Freeman & Co., Toledo, Ohio.
L. Pearlman, New Haven, Conn.
Bernstein Bros., Nashville, Tenn.
Harry Kortz, Denver, Colo.
John Lamont & Son, New York City.
William Petry, Los Angeles, Cal.
Riggs & Bro., Philadelphia, Pa.
Edward Fox, Union Hill, N. J.
N. Anusiewicz, New York City.
Abraham Strass, New York City.
Kaplan & Zudeck, New York City.

C. E. Banta & Co., Pittsburg, Kans.
Chas. A. Becker & Co., Newark, N. J.
Frankfurt Loan Co., Norfolk, Va.
Gilbert Jewelry Co., La Grange, Ga.
Jos. A. Konrad, Henry, Ill.
Lafe Steen, Mason City, Ill.
The American Jewelry Co., Leadville, Colo.
J. H. Engel, Brockport, N. Y.
Chas. Geist, New York City.
J. H. Jewell & Sons, Cattaraugus, N. Y.
The Johnson Jewelry Co., Colorado Springs, Colo.
Otto B. Kartevold, Brooklyn, N. Y.
Samuel Newman & Co., East Hartford Meadow, Conn.
T. H. Wynne, Griffin, Ga.
Julius King Optical Co., New York City.

Working for Customs Reforms

At a meeting held in the Broadway Central Hotel, on Wednesday, March 7th, a number of importers adopted resolutions favoring the passing into law of a bill before the House of Representatives, which provides for changes in the administration of the customs laws. It is believed that this bill would effectually remove a number of inequalities in the present administrative system, and prove more satisfactory to general business interests. The firms represented at this meeting included Bawo & Dotter, Haviland & Co., Endemann & Churchill, George Borgfeldt & Co. and Charles Ahrenfeld. As noted in these columns last month, the Merchants' Association of New York has interested itself in this movement, having forwarded a letter to the secretary of the treasury at Washington, embodying the recommendations of a committee of the association, which had been investigating the conditions of the customs service. Among the unsatisfactory features of the system enumerated by the committee is the acceptance, as the basis of assessment, of the foreign market value of imported articles having two prices, one for home and another for export trade. The committee also points out that it is unfair to the importer to determine the duty by the price to American consumers.

Death of F. V. Lindon

Francis V. Lindon, who died some weeks ago, had been in the jewelry business in Brooklyn for over thirty years. After the holiday activity he went abroad for the benefit of his health, but the trip was unavailing and he succumbed soon after his return. He was fifty-two years old and a native of Brooklyn. He opened

a business at 15 Bond Street, in that borough, and afterwards removed to 62 Bond Street, where he remained for twenty-five years. He was official timekeeper of Brooklyn, with the function of regulating the clock in the City Hall tower. He was an authority on jewels and precious stones, and supplied many of the jeweled gifts presented to local officials from time to time. Aside from his jewelry business he was interested in real estate, and in both of these spheres he reaped a gratifying measure of success.

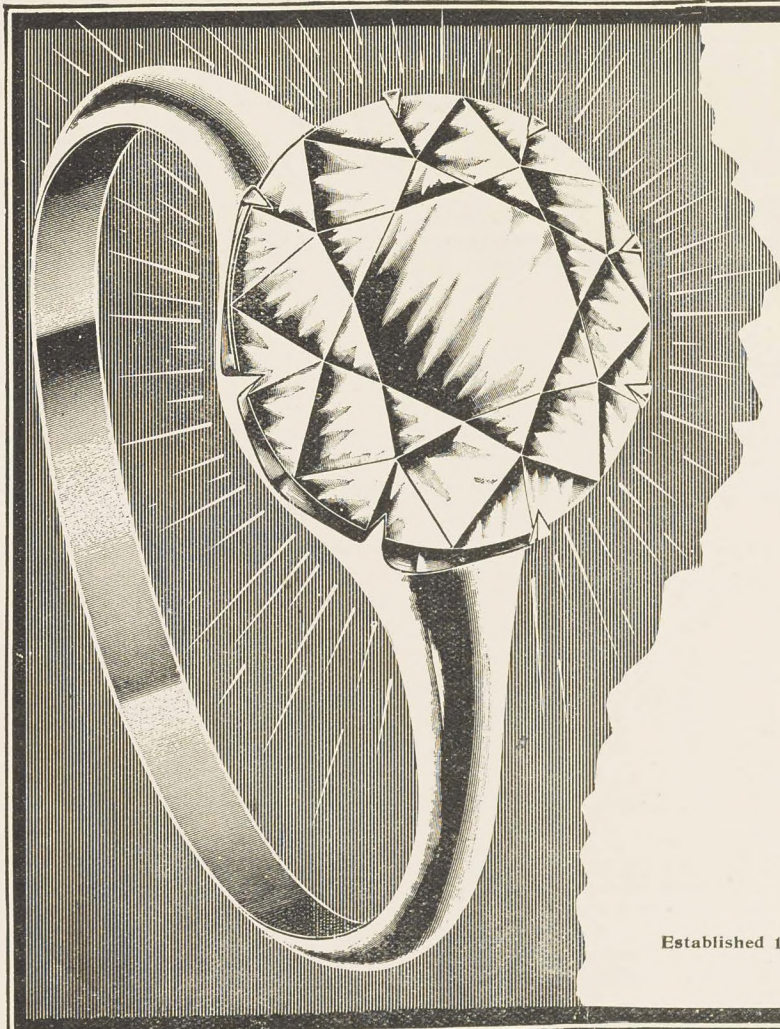
Possible Bracelet Boom

"This short-sleeve fashion to which the women have taken so kindly is going to be a great help to our business," said a Fifth Avenue jeweler, recently. "Not a few leaders of fashion have already bought bracelets to wear outside their long gloves, and when the weather gets hot and silk gloves and bare arms take the place of kids you'll see every woman's arm adorned with bracelets. A single bracelet on one arm will not be the fashion, either. The decree has gone forth that a woman may wear bracelets on both wrists, and as many of them as she can afford to buy."

Henry Freund & Bro., manufacturers of elk goods and jobbers in watches and jewelry, have engaged fine quarters in the new Cockcroft Building, which they will fit up and occupy the latter part of April. The firm did not wish to move off the Lane, where they have been located for so many years, but they could not obtain a large enough office vacant at this time. They will occupy three large rooms, which will give them seventy-five per cent. more space than at present. The new offices will be fitted up with fine new fixtures, in addition to one or two large safes and a number of the latest office devices for systematizing and facilitating the prompt and accurate transaction of business. The firm invites all the old customers and others in the trade to call at their new office, when in the city, and partake of the advantages of the more commodious quarters for the better selection of goods and the comfort of visitors.

Thomas O. Bergen, assistant superintendent of the J. D. Bergen Cut Glass Co., died on March 8th, at Meriden, Conn. Deceased was fifty-one years old and was the second of six brothers, all glass cutters. He has been connected with the J. D. Bergen Company for about twenty years, and like the other members of the family enjoyed the reputation of being a skilful workman. He had been afflicted with Bright's disease for some years back and this was the immediate cause of his death.

The Crescent Watch Case Co., of this city, has just gotten up for distribution to the trade a very neat and useful desk-ruler. In addition to giving the dimensions of a foot by inches and fractions thereof, it has a measure for different size American movements from the smallest to the largest, and also a measure for Swiss movements in lignes. Dealers interested can secure ruler by calling or addressing company's office, 23 Maiden Lane. The rulers are nicely finished in green enamel and gilt lettering.



Single Stone Diamond Rings

We carry a large stock of Ladies' and Gents' Diamond Rings. The tag of each ring is marked with a letter or number to correspond with our "Grading System," to indicate the quality of the diamond.

This is a time-saver for the expert and a safe and sure guide for the inexperienced. Where they are marked as being perfect we warrant them as being so.

We also have a complete assortment of loose diamonds and can supply any jeweler's needs. Our prices will enable you to meet any competition. Order of us and others, and compare prices and qualities, when you have a prospective sale.

HENRY GINNEL & Co.

DIAMONDS and WATCHES

Established 1835

31 Maiden Lane, NEW YORK



POUYAT CHINA



Look for the Pouyat marks

J. P.
L.
FRANCE

It's a money-maker for the jeweler—it cannot be beaten.

If your jobber does not carry it, drop us a line and we will direct you where to get it.

Write for handsome booklet
"Porcelain"



Paroutaud & Watson

37-39 Murray Street
NEW YORK

H. KROLL & CO.

MAKERS

36 & 38 John Street
NEW YORK



Mountings that help sell
Diamonds

Combs, Hat Pins and Waist Sets

SIGNET RINGS

(our own make) A SPECIALTY

will be the main features of our

Spring Line

Memo. Orders
Solicited

L. Witsenhausen

Chicago: 405 Masonic Temple
L. KATLINSKY

47-49 Maiden Lane
New York

New York Letter

(Continued from page 579)

Amendment to Lien Law

A bill has been introduced in the New York State Assembly, which purports to amend the lien law governing conditional sales. This bill reads as follows:

Conditions on which vendor may retake property: Whenever articles are sold upon condition that the title thereof shall remain in the vendor, or in some other person than the vendee, until the payment of the purchase price, if the vendee does not make such payment, or any instalment thereof, when the same becomes due, the vendor shall serve a written notice upon the vendee requiring him to make such payment within thirty days after the service of such notice. If such payment is not made the vendor may, upon the expiration of such thirty days retake any such article upon paying to the vendee one-half of the amount paid by him upon the original contract. If any person shall attempt to retake goods so sold without giving the notice or repaying one-half of the purchased price, as required by this section, he shall be guilty of a misdemeanor, and in addition shall be liable to a penalty of \$100, recoverable by the party aggrieved in any court of competent jurisdiction.

Jewelers' Protective Union

The annual meeting of the Jewelers' Protective Union was held on Tuesday, March 6th, at 170 Broadway. At this meeting a new office was created, that of assistant secretary and treasurer, and Fred. L. Goddard, son of the secretary and treasurer, was chosen to fill it. The complete list of officers is now as follows: President, O. G. Fessenden; vice-president, Frederick H. Larter; secretary and treasurer, Ira Goddard; assistant secretary and treasurer, Fred. L. Goddard; executive committee, August Oppenheimer, Leopold Stern, Chas. F. Wood; G. W. Street, C. G. Alford, A. K. Sloan, W. T. Gough, W. I. Rosenfeld. The executive committee submitted the following report:

To the Members of the Jewelers' Protective Union:

Your executive committee reports that, during the past year, there occurred numerous cases in which the trunks of travelers holding certificates in this organization have gone astray, and it is with regret that we must report that in most of the cases the fault has been that of the traveler. Notwithstanding the instructions as to the care which should be taken of the stock entrusted to them, not once—but again and again repeated—there are some travelers on whom what we say has had apparently no effect. However, we are glad to say that these are but a small number compared with our full membership, the majority of the travelers holding certificates from the union doing all they can to conscientiously carry out our wishes.

Every case of a loss of a trunk is carefully investigated by us, and when we have found the fault has been with the traveler, we have not hesitated to take such steps as we deemed proper to protect the interests of the organization. While the details of all these cases are subject to your inquiry, we do not deem it wise to mention these details in a public report.

There have been several robberies of stocks entrusted to the care of travelers holding certificates from us. In all but one case we have succeeded in capturing the parties who committed the robberies. We are still at work on the one robbery now open for investigation, and hope to accomplish our purpose, viz., the capture and conviction of the thief or thieves.

The organization is in fine shape and never better equipped than at this time to accomplish the objects we have in view.

Your president has lately visited the principal offices throughout the country of the agency we employ investigating cases, etc., as they arise, and we believe these visits have done much to interest the managers of the various offices in our particular work, and will, we have no doubt, be of great benefit to us.

We realize more than ever the influence of our organization to better the conditions existing in the trade, so far as they pertain to travelers; and while there are many things to be guarded against, and to be yet accomplished, we have no hesitation in saying that to-day we are in better shape to safeguard the interests of every member and every traveler who holds a certificate from us than ever before.

There will be presented to you a proposition to amend Articles III and VII, which amendments would allow your executive committee to elect an assistant secretary and treasurer without an added expense, which amendment we approve and trust you will adopt.

Another Pawnbrokers' Bill

Still another amendment has been introduced into the assembly at Albany affecting the business of pawnbrokers. This bill, whose sponsor is Mr. DeGroot, of New York, has a special interest for the jewelry trade, inasmuch as under its provisions pawnbrokers would have to permit examination of stolen goods by properly interested parties at any time during business hours. The quest for stolen jewelry in pawn would be obviously accelerated by the enactment of this measure, which reads as follows:

Section 1. Chap. 10 of Title 10 of the Penal Code, is hereby amended by adding at the end thereof a new section to be Section 355-a, and to read as follows:

Section 355-a. Pawnbroker to Allow Examination.—A pawnbroker must at any time during business hours, without charge and without first requiring a redemption or promise of redemption of the pledged property, show the pledged property and allow an examination thereof by any person possessing and exhibiting a memorandum, note, ticket or stop ticket therefor, or by any person accompanying such person. Every failure or refusal by a pawnbroker to show such property and allow such examination, under the conditions aforesaid, is a misdemeanor.

Section 2. This act shall take effect Sept. 1, 1906.

Incrusted Gems Legally "Imitations"

By a judgment of the United States Circuit Court of Appeals, New York, on the appeal of the Government against the decision of the Board of General Appraisers overruling the collector's assessment, which decision was affirmed by the Circuit Court, incrustated stones are properly classifiable as imitations of precious stones and dutiable at 20 per cent. The importers were R. F. Downing & Co., who were represented by Comstock & Washburn. The articles in dispute consisted of imitation precious stones incrustated, which, as claimed by the importers, were held by the board and the Circuit Court to be within par. 435, tariff act of 1897, providing for "imitations of . . . precious stones . . . not ornamented or decorated." The Government contended that they were excluded from this provision because the incrustations constituted an ornamentation or decoration within the meaning of said paragraph, and that, therefore, they had been properly classified as manufactures of glass or paste under par. 112. From this latter view the court demurred, sustaining the importing firm's contention and the affirmation of the lower court.

Handsome Silver Service

The silver service for the battleship *Connecticut* will soon be completed by the International Silver Co. The design is beautifully emblematic of the State and its history. The service will consist of thirty-six pieces, the punch bowl with its accompanying two dozen cups and ladle, making twenty-six of these pieces. The punch bowl is a very elaborate piece, with handsome ornamentation. Around the base are shown oak leaves and acorns, with the seal of Connecticut in the center. A panel on one side of the bowl

represents the combat between the *Constitution* and the *Guerriere*. The dismasted *Guerriere* is shown in the foreground, while the *Constitution* seems unharmed by the conflict. The handles are modeled after the prow of the old *Hartford*, Admiral Farragut's old flagship. The bowl is surrounded by twenty-four goblets. The centerpiece is the most imposing part of the service. It is decorated handsomely and has this inscription: "Presented to U. S. Battleship *Connecticut* by the State of Connecticut." A panel on one side of the bowl represents the third war vessel named *Connecticut*, and the etching on the other side represents the second *Connecticut*, the present warship being the fourth of the name. The set will contain 1300 ounces of silver and cost \$4000.

Powers & Mayer are making elaborate preparations for their fourth annual exhibition of fine gem-set jewelry which will be held August 13th-18th. The previous exhibitions attracted widespread attention by reason of the magnificence and beautifully-artistic character of the display, but these efforts, the firm states, will be eclipsed in the forthcoming exposition.

Frank W. Harmon, who has represented M. B. Bryant & Co., of this city, in the East for so many years, is, at this writing, seriously ill at his home in Springfield, Mass., and C. B. Smith, the firm's Pennsylvania representative, is temporarily attending to trade in his territory.

H. B. Peters & Co., wholesale material and dealers in specialties, will move from 177 Broadway to 87 Nassau Street, about May 1st. They will occupy larger quarters on the second floor. The new location is on the corner of Nassau and Fulton Streets, with entrances on both streets. Along with W. Green & Co., who will have quarters in the same block, this will make this section of Nassau Street still more of a material headquarters.

Capt. Wm. A. Bryant, of M. B. Bryant & Co., gold ring manufacturers, 7 Maiden Lane, sailed on March 15th on board the *Deutschland* for a trip through England, France and Germany.

Louis Friedlander, of R., L. & M. Friedlander, 30 Maiden Lane, New York, accompanied by Mrs. Friedlander, after a pleasant sojourn in Cairo, Egypt, are making an extended tour up the Nile, visiting all the interesting ruins and temples as far as the first cataract.

I. Bach, importer of clocks and novelties, left for Europe last month to buy the latest goods in the varied lines he handles. Theo. Schisgall, of this firm, recently returned from a trip abroad with a number of new attractions, and has started on a visit to the western trade with the new line of novelties, fancy and cuckoo clocks.

The Wagner Mfg. Co., makers of combs, have gotten over the worst of their trials occasioned by the recent fire in their factory, and are now in a position to take care of orders with reasonable promptness. Right after the fire they secured new quarters, which they fitted up as quickly as possible. The fire came at a time when they were rushed with orders, but they have now caught up with these and are able to attend to the wants of their customers with their old-time service.

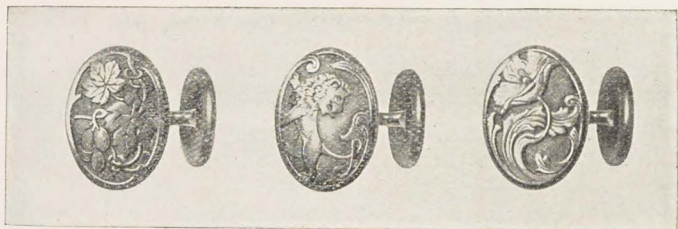
Crouch & Fitzgerald, the well-known manufacturers of jewelry trunks, bags and fine leather cases, will about May 1st, remove from 161 Broadway, where one of the local stores is now located, to 177 Broadway, between Cortlandt and Dey Streets. The firm has two other branch stores in this city, one at 688 Broadway and the other at 723 Sixth Avenue. It has two factories, located respectively at 352-354 West Forty-first Street and 357 West Fortieth Street.

(Continued on page 583)

A FEW PATTERNS



From an attractive new line of 14 K. Sleeve Buttons at moderate prices.



All put on the market since January 1, 1906.



May we show them to you through our salesmen or our Mail-Order Department?

LARTER & SONS

21-23 Maiden Lane
New York

4
over
40
years
Ring Makers



Trade-Mark
Registered

Z-K

We
are
sending
customers
to
your
store

Z-K

Z-K NECK, GUARD
AND GENT'S CHAINS
GUARANTEED

Your money will be refunded should the workmanship be in the least imperfect or should any part of the chain in natural wear break in 20 years



See that
Z-K
and the
Karat-Mark
is
Stamped
on the Chain.

"Let it be a
Z-K GOLD
CHAIN"

For Sale at your Jewelers. If not, write us.

Ziruth-Kaiser Co., 2 Maiden Lane, New York.

Greatly reduced from APRIL, 1906, number of McClure's Magazine

Z-K

Your
Jobber
sells
Z-K Gold Chains
If not
send order to us

Z-K

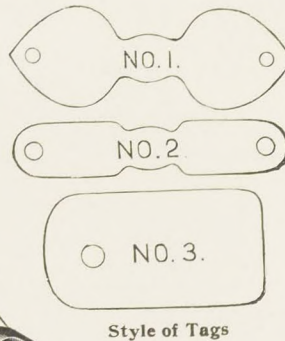
ZIRUTH-KAISER CO.

2 Maiden Lane, New York

"THE" Machine for Tagging Rings, etc.

Complete Outfit consists of { Our Eyelet Machine, 1000 Celluloid Tags, 1 Bottle Ink

Price complete,
\$5.00 net



Style of Tags



Hand Pliers are
Useless for
Tagging Rings

The HOLD-ON CLUTCH

Best
Safest
Simplest



YOU slide the
Clutch on—
IT does the rest

Pat. May 20, '02

A Splendid Seller
Retailing at 50c.

Scarf Pin Insurance

Pat. applied for

Ask your Jobber or write to

Hold-On Clutch Co., 33 Gold St., NEW YORK

New York Letter

(Continued from page 581)

Small Brass Rings
"Toys"

The protest of George Borgfeldt & Co. against the assessment of duty at the rate of 60 per cent. ad valorem, by the New York collector of customs on a consignment of small brass finger rings, was recently upheld by the board of general appraisers on the grounds taken by the importers, namely, that the rings were dutiable at 35 per cent. ad valorem as toys. These rings are set with cheap imitations of precious stones, and are fashioned for wear by small children. They are similar to those usually enclosed in prize packages of candy. General Appraiser Sharretts, who rendered the decision, cited as a precedent Strauss vs. United States, in which the importer was upheld by the Circuit Court, in whose judgment the Treasury Department subsequently acquiesced.

Alling & Co.'s
New Directorate

Changes were made in the personnel of the directorate of Alling & Co., jewelry manufacturers, whose factory is in Newark, N. J., and salesrooms are at 180 Broadway, this city, at a meeting of that body held last month. Frank M. Welch resigned from the position of president and manager at this meeting, and Matthias Stratton was elected to succeed him. John D. Alling was re-elected vice-president and F. H. Buhler was re-elected treasurer, and also elected to the position of secretary, the duties of which have hitherto been performed by Mr. Stratton. In addition to the officers, the new directorate includes Mrs. Emma D. Alling and the designer and factory foreman, W. A. Seidler. Mr. Stratton, the new president and manager, has been with this company since January, 1898, and altogether, has been connected with the trade for a quarter of a century. For twelve years he was with the well-known, Philadelphia firm of J. E. Caldwell & Co., and was for a time vice-president of the Philadelphia Jewelers' Club. He afterwards traveled in the West for five years and was secretary and treasurer of the Brotherhood of Traveling Jewelers. Mr. Buhler, the new secretary-treasurer, has had a twelve-year connection with the jewelry trade and has been with Alling & Co. for the past half decade.

F. G. Moyer, of the American Watch Case Co., left the early part of last month on a six-weeks' trip through Europe.

The New York Watchmakers' Society held its fortieth anniversary banquet and ball on Saturday evening, March 24th, in Teutonia Assembly Rooms, Seventeenth Street and Third Avenue, this city. The dual function was a most enjoyable one, for which thanks are largely due to the committee of arrangements.

Howard S. Kennedy has moved his smelting and assay office from the thirteenth floor to the eighth of the Jewelers' Building, at 13 Maiden Lane. He will occupy larger quarters in Room 801 in the building, and not only have a front office, but better light and more commodious quarters.

Jewelers'
Bowling League

The final stage of the tournament of the Jewelers' Bowling League, which has been in progress at Ehler's Bowling Academy, Brooklyn, since September 12th, proved a very fitting culmination to a delightful series of games. Interest in the contests was unflagging to the end, and those who followed the sport since its inception were well rewarded for their constancy.

At the close the rivalry for the various prizes was as intense as it was good humored. The victors were magnanimous in their triumph, the vanquished undismayed by the result and it was evident that in a special sense there was glory enough for all. The games will have a happy sequel in the third annual dinner of the league, which will take place in the Broadway Central Hotel, situated between Bleeker and Third Streets, New York City, on Saturday, April 7th, at 6.30 o'clock. Invitations for this interesting function were issued some weeks ago, and a special effort is being made to provide a feast worthy of the tourney, which it will formally bring to a close. One of the interesting features of this banquet will be the distribution of the prizes won by the several teams, and this function will be presided over by John B. Wood, president of the club. In accordance with the spirit of the occasion there will be no after-dinner speechmaking, but instead there will be a high-class vaudeville entertainment lasting two hours, and embodying many delightful scenes. The performers include a number of finished players in this popular branch of theatricals. Those in the trade who desire to attend this reunion may obtain tickets of admission from any member of the following committee: C. F. Brinck, G. A. Blindenhoefer, E. H. Dean and A. C. Capouilliez. Following are the final scores of the league, continued from our last issue:

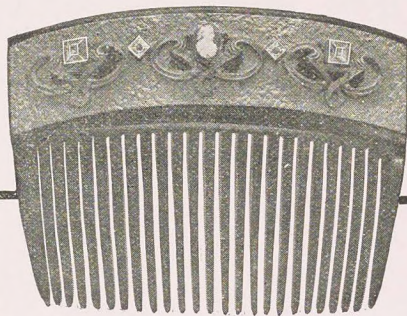
February 27th:			
N. H. White & Co.	800	802	763
Elgin National Watch Co.	723	825	797
February 28th:			
Avery & Brown	720	725	837
Tiffany & Co.	742	805	858
March 1st:			
Julius King Optical Co.	881	767	730
Udall & Ballou	704	607	646
March 2d:			
A. H. Smith & Co.	776	739	778
C. F. Wood & Co.	829	818	924
March 6th:			
N. H. White & Co.	794	674	785
A. A. Webster & Co.	762	690	795
March 7th:			
Dennison Mfg. Co.	753	784	851
Avery & Brown	715	744	730
March 8th:			
Jos. Fahys & Co.	829	786	761
Elgin National Watch Co.	544	527	489
March 9th:			
L. E. Waterman & Co.	821	725	670
Gorham Mfg. Co.	739	645	744
March 13th:			
A. A. Webster & Co.	737	785	774
Aikin, Lambert & Co.	627	773	791
March 14th:			
A. H. Smith & Co.	736	751	732
Julius King Optical Co.	703	794	701
March 15th:			
N. H. White & Co.	790	666	787
Avery & Brown	704	736	760
March 16th:			
Tiffany & Co.	819	790	810
C. F. Wood & Co.	811	801	839
March 20th:			
Udall & Ballou	641	706	762
L. E. Waterman & Co.	733	669	630
March 21st:			
Julius King Optical Co.	783	670	844
Cross & Beguelin	853	829	772
March 22d:			
Jos. Fahys & Co.	702	689	681
A. A. Webster & Co.	730	755	795
March 23d:			
Dennison Mfg. Co.	781	806	724
C. F. Wood & Co.	919	794	775

Standing of Teams

	Won.	Lost.	Per cent.	High score
C. F. Wood & Co.	32	10	.761	924
Dennison Mfg. Co.	32	10	.761	905
Tiffany & Co.	29	13	.690	894
Jos. Fahys & Co.	28	14	.667	944
Cross & Beguelin	27	15	.641	872
A. H. Smith & Co.	25	17	.595	859
N. H. White & Co.	23	19	.547	858
Aikin, Lambert & Co.	20	22	.476	873
Avery & Brown	18	21	.461	890
A. A. Webster & Co.	16	23	.410	831
Udall & Ballou	15	24	.384	867
L. E. Waterman Co.	16	26	.380	881
Julius King Optical Co.	14	28	.333	881
Elgin National Watch Co.	11	28	.282	825
Gorham Mfg. Co.	2	40	.047	745

High individual score—G. V. S. Carroll, Dennison Mfg. Co., 243.

C. F. Wood & Co. and Dennison Mfg. Co. are tied for first place and will roll three games to decide the championship.



JEWELRY

SOLID GOLD
GOLD FILLED
SILVER

- | | |
|-------------|-------------------|
| Dog Collars | Belt Buckles |
| Bracelets | Collar Supporters |
| Barrettes | Brooches |
| Combs | Scurf Pins |
| Crosses | Links |
| Lavaliers | Locketts |
| Hat Pins | Fobs |
| Waist Sets | Rosaries |
| Veil Pins | Pendants |
| Rings | Elk Buttons |

NEW SPRING NOVELTIES

in Large Variety

Our lines always show
New Styles, New Articles and
New Designs in advance of
the general market.

QUALITY AND BEAUTY
OF DESIGN

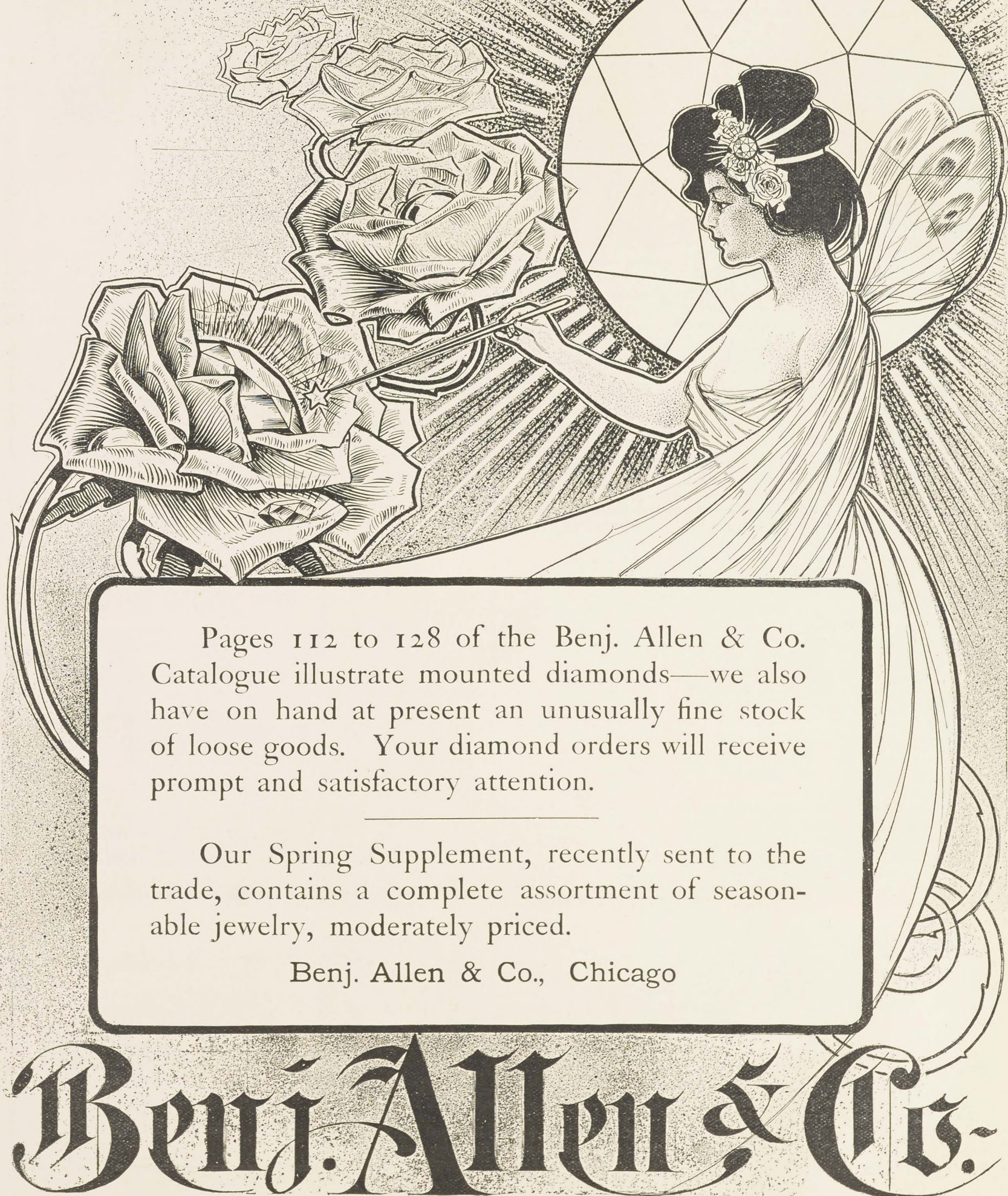
is found throughout our stock

Let us hear from you



15 Maiden Lane
NEW YORK

DIAMONDS



Pages 112 to 128 of the Benj. Allen & Co. Catalogue illustrate mounted diamonds—we also have on hand at present an unusually fine stock of loose goods. Your diamond orders will receive prompt and satisfactory attention.

Our Spring Supplement, recently sent to the trade, contains a complete assortment of seasonable jewelry, moderately priced.

Benj. Allen & Co., Chicago

Benj. Allen & Co.



WESTERN BUREAU OF THE KEYSTONE
ROOM 1201 HEYWORTH BUILDING
CHICAGO, March 24, 1906.

Present Conditions and Prospects

In the West, Southwest, South and Northwest March is ending up with a good record, trade being of excellent volume for the season of the year. The records of the first three months of last year have been easily distanced both among the retailers and jobbers in the above-mentioned territories, and the indications are that there will be a continuation of present trade conditions right through the Spring and early Summer. Winter wheat crop reports are as good as ever and the prospects of averting the threatened coal strike lends strength to industry of all kinds. The vast amount of snow that has fallen throughout Chicago territory the past fortnight has been of incalculable benefit to the wheat belt. In fact more snow has fallen since the opening of March than during the entire earlier part of the Winter. This heavy snowfall at this season of the year will prove a wonderful benefit to the great West, Southwest and Northwest country in general. Much of the snow was almost all water, and when all the snow melts the greater part of it will go into the ground. This will remove what frost there is left and place the soil in first-class condition for the commencement of the Spring work. Farmers generally agree in the belief that conditions for another prosperous crop season could not be more favorable than at present.

Larger Acreage Devoted to Crops than Ever

Another encouraging condition in the great Southwest and Northwest is the fact that thousands of new settlers are pouring into those sections and acreage devoted to crops this season will be considerably larger than last year's acreage. Indeed, the prospects for a big grain crop have not been so good in years as for the present season. The acreage in the Southwest and Northwest will be larger by 20 per cent. and the yield of all grains should be heavy. The Winter just closed is likened to that of 1896-7, when the yield of grain was the heaviest ever known, though the Summer was extremely warm. Should that season be duplicated as to yield, Minnesota and the Dakotas should produce 300,000,000 bushels of wheat. But it is doubtful

if high prices can be maintained with such a yield unless the exports of grain or flour should be unusually heavy—treble the exports during the past two years. Indeed, unless there shall be a drought in Argentina and Russia, it appears that wheat will scarcely be worth 50 cents a bushel, but such a condition will not affect the farmers of the West as it did in 1896, for they are now engaged in diversified farming to such an extent as to make their wheat crops merely a side issue.

Expansion is on Everywhere

In fact, underlying conditions are so substantial in the Western business centers that it is difficult to conceive possibility of interference with Western prosperity during the present year. The trade activity of the interior has not been overestimated by the newspaper reports. Not in years has the Winter season shown such an abundance of betterments in manufacturing facilities and in the development of building. The large cities are not alone in this, but middle class towns are making new records and are offering inducements to every kind of industry. The high prices received for grain have fostered this, and the general feeling of prosperity has made municipalities eager to expand, adding materially to their public buildings and undertaking improvements generously. Expansion is on everywhere. Every branch of industry is in active operation, and few idle men are to be found in the Great West. For this reason it is fair to predict that the country communities all over the prairie country will see in the next two months as large individual buying in all lines of merchandise as ever in the West's history for the Spring season. This means better classes of goods and more liberal buying in the luxuries like diamonds, watches and jewelry. High prices for wheat and corn and a fair outlook for Spring crops combine to warrant this prediction. There is no doubt as to the general feeling in the West. It is one of confidence and optimism.

Commercial Association Men at "Rally"

A rally of members of the Ways and Means Committee of the Chicago Commercial Association and other members was held last Wednesday when a luncheon was given at the Grand Pacific Hotel at noon. The most important business was the discussion of a successor to the late Alfred M. Compton,

"father of the Chicago Commercial Association," as chairman of the Committee. The names of three merchants were mentioned for the post. They are: John W. Scott, of Carson, Pirie, Scott & Co.; E. M. Skinner, of Wilson Brothers and Richard C. Hall, of the Duck Brand Company. The choice of a chairman was postponed until the next meeting.

A Flourishing Watchmakers' Society

The Swedish Watchmakers' Society, of Chicago, held their regular annual meeting for the election of officers and other regular business on the evening of March 7th at their rooms on East Washington Street. It would seem from the Treasurer's report that this Society is an ideal labor and social organization for the reason that it is in every way prosperous, has \$1417.10 in the bank and has accumulated a sick fund of \$1200. This is a remarkable showing for a society of less than one hundred members and a most creditable one as well. The Society commences its fifteenth year next month in fine condition and with a bright future. Its seventh annual exhibition will be held the last week in April in connection with the extra competition among the members for the "Waltham" prize. This prize will be awarded to the member whose exhibit shows perfect construction and fit as well as most excellent workmanship. The following watchmakers have been chosen to act as judges: Theodore Gribi, Alfred Youngdahl and J. A. Hesselbom.

Personal Mention

President Hulburt, of the Elgin National Watch Company, is at his desk again after a ten days' outing spent in New Orleans.

Harry S. Hyman, head of Hyman, Berg & Company, is enjoying a month's outing in old Mexico. He is expected home early in April.

James J. Lewis, a member of the faculty of the Northern Illinois Optical College this city, is back at his post again after a two weeks' confinement at his home from sickness.

E. M. Lunt, manager of the Chicago office of the Towle Manufacturing Company, left for Denver the first of the week, where he is to join O. F. Samuelson, the Company's far West salesman, and together they will make the Pacific Coast territory. Mr. Lunt expects to be absent for a month.

Robert M. Hamilton, of the widely known chain firm of Hamilton & Hamilton, Jr., Providence, R. I., spent a few days in town the early part of the month calling on the trade in company with George A. Jewett, the firm's Chicago and Western representative.

L. M. Levy, general selling agent of the Philadelphia Watch Case Company, was in the city for a few days last week calling on the jobbing trade.

Harry Kohn, of the Stein & Ellbogen Company, returned the early part of the week from a short business trip to New York.

John M. Cutter, general selling agent of the Trenton Watch Company, is spending several days in town this week calling on the trade in the interests of his company.

H. M. Carle, Chicago and Western agent of The Keystone Watch Case Company, and Mrs. Carle, returned the first of the week from a fortnight's trip to Cuba where they enjoyed a delightful outing.

C. D. Peacock and Walter Buffington, in charge of the diamond department of the

(Continued on page 587)

WATCHES

WATCHES

If you were hunting Antelope you probably would not follow a flock of Sheep, but rather search out a place where Antelope congregate together in bunches. If you are looking for a line of jewelry don't waste your time on us, for we have congregated in **Chicago** and **Pittsburg** two as fine bunches of **Watches** as can be found. You are **cordially invited** to hunt in, on, around, or about our game park as suits your convenience.

M. A. MEAD & Co.

Wholesale Agents for only the largest and best known manufacturers of
American Movements and Cases

Chicago

Columbus Memorial Building

Pittsburg

Farmers' Bank Building

Chicago Letter

(Continued from page 585)

Peacock store, have just returned from a two weeks' business trip to New York.

Adolph Schwob, the well-known New York watch importer, spent several days in Chicago recently the guest of J. W. Tice, his Chicago agent.

Mrs. Todd, wife of the late James A. Todd, the former manager of the Chicago office of the Towle Manufacturing Company, died at the home of a niece in New York City, March 22d, after a protracted illness. This sad news will be received with genuine regret by the trade in Chicago and throughout the West, where both Mr. and Mrs. Todd had a large circle of friends.

W. A. Fay, Chicago and Western representative of the John T. Mauran Manufacturing Company is doing the "Western Circuit" this week.

W. J. Miller, Chicago manager of the Seth Thomas Clock Company, has just returned from a ten days' business trip among the larger cities of the middle West.

Herman F. Hahn, head of the house of H. F. Hahn & Company, is at his desk again after a two months' outing enjoyed among the Florida and Eastern resorts.

F. A. Hardy and J. H. Hardin, of F. A. Hardy & Company, are both absent in New York on business connected with their Eastern branch.

A. R. Oughton, Chicago agent for the Jennings Bros. Manufacturing Company and the Van Bergh Silver Plate Company, has removed both lines to Room 212 in the Silversmiths' Building. Mr. Oughton has recently succeeded A. Vermaas as Chicago agent of the Van Bergh Company.

News from the Trade

H. C. Klein & Sons, of Muncie, Ind., are now nicely located in their handsome new store, and their friends in the trade who call on them are congratulating them upon the fact that they now have about the most modern and swell jewelry establishment to be found in the Hoosier State. Their furnishings are in rich and elegant taste, the arrangement and display of their stock is fine, their storeroom is a model for its purpose, and their location is superb. Their extensive window space could not well be surpassed and the firm are using it to excellent advantage. The jeweler, who desires to see a model jewelry establishment of the most up-to-date type in view of making improvements in his own store, should drop off at Muncie and look over the Klein store.

E. Maltz and A. J. Kurtz have embarked in the wholesale jewelry business in room 701 Champlain Building, under the firm name of E. Maltz & Company. For the past eighteen years Mr. Kurtz has been engaged in the retail jewelry business at 821 Milwaukee Avenue, this city, and Mr. Maltz is a well-known traveling salesman.

George A. Jewett, Chicago and Western agent for the Hamilton & Hamilton, Jr. line of chains, has just returned from a week's trip through the Northwest and reports a better business done than on the same trip last year.

George D. Lunt, manager of the New York office of the Towle Manufacturing Company and Mrs. Lunt, were in Chicago, for a day this

week en route to the Pacific Coast where they will spend a few weeks visiting at Mrs. Lunt's old home near San Francisco.

Kors Bros., for several years past located at Virginia, Ill., have removed to Independence, Kansas, where they have opened up a modern store.

J. E. Evans has just opened a new jewelry store at Platteville, Wis. Until recently Mr. Evans was in the employ of Jeweler C. H. Clifford of the same town for several years, and is quite well-known to the trade as a promising young business man. Mr. Evans spent several days in the Chicago market the early part of the month selecting his opening stock.

Walter Sperling, the pioneer jeweler of Seneca, Kansas, and one of the most successful dealers in the trade of the Sunflower State, has recently gotten into his new store which is a model in its way. New modern fixtures have been installed and rare good taste has been displayed in the arrangement of the new establishment. Mr. Sperling is justly proud of his new store which we are assured by those who have recently called there is creditable alike to his enterprise and his town. We take pleasure in noting the prosperity and expansion of our old-time friend.

Steve R. King, Western traveler for C. H. Knights & Company, returned last week from an extended trip over his territory and reports that the jewelers generally are enjoying a better business so far this year than they did for the same period last year.

I. E. Griffie, of Boone, Iowa, has recently installed some new fixtures which have added greatly to the attractiveness of his store.

Swartchild & Company are now busy at work on their new tool and material catalogue which they expect to issue within the next few months. The new book will be larger and more complete than any previous catalogue that they have issued.

Barry S. Hersberger is a new man on the traveling force of Norris, Alister & Company. He will cover Michigan territory.

Harry Coffen, of New Castle, Ind., is now nicely located in his new store. Travelers who recently visited the above town tell us that the new establishment is one of the real swell stores of the Hoosier State.

John Booth, the well-known jeweler of Alton, Ill., has commenced to remodel his store. Before he gets through he proposes to make it thoroughly modern and up-to-date.

L. E. Griffith, of Omaha, Neb., has bought out the interest of his partner S. E. Hall in the wholesale jewelry business carried on under the firm name of Griffith & Hall. The business will be continued under the style of L. E. Griffith & Company.

H. W. Price, watchmaker for Jeweler Frank A. Hannis, York, Neb., spent the greater part of the month of March in California whither he went to join Mrs. Price and accompany her home. Mrs. Price spent the winter in California.

Charles W. Fleming, of Lincoln, Neb., has just finished putting in some new fixtures in his store which have made it more attractive than ever.

A. F. Westlake, dean of the Horological Department of the Bradley Institute, the widely known polytechnic school of Peoria, Ill., spent a day in Chicago recently. While here he was a pleasant caller at KEYSTONE headquarters.

Mr. Westlake said that their school was enjoying an unusually large attendance just at present.

The Geneva Optical Company have recently made extensive improvements in their premises at 63 and 65 Washington Street by inaugurating a general Spring house cleaning. A new steel ceiling and new linoleum on the floor are visible as a result and the improvement is quite noticeable. This firm report a steady improvement in their business, the new year thus far showing a fine increase over the same period last year.

A. L. Alexander has succeeded to the jewelry business of G. S. Dunlap, at Mapleton, Iowa. The latter removes to Sioux City, Iowa, where he has embarked in the retail optical business.

G. S. Dunlap, formerly in the retail business at Mapleton, Iowa, has removed to Sioux City, in the same State and opened up a swell optical parlor for a strictly retail business.

Jeweler Frank Buren, of Tampico, Ill., is spending a few weeks pursuing a course in optics.

The following students have just recently graduated in Optics from the Northern Illinois College of this city: Mrs. Cooley of Michigan; W. A. Brooks, Iowa; Walter A. Beer, Indiana; Henry C. Cleary, Ohio; S. D. Reichelderfer, Ohio, and E. S. Pomeroy, Utah.

J. N. O. Thomson, formerly of Norfolk, Va., has succeeded to the business of the late E. C. P. Show at La Grange, Ind., and will continue the same. Mr. Thomson spent two days in the Chicago market the past week on a purchasing trip. He was a pleasant caller at KEYSTONE headquarters during his stay in town.

George F. Williams, well-known in the trade from his long connection with William & Simeon L. Rogers as their Western traveler, is now manager of the jewelry department for The Bennett Company, a large department store at Omaha, Neb. Mr. Williams was in town for several days the past week attending to some buying and shaking hands with his old friends in the trade.

Fred Blauer & Co. have removed from 88 State Street to room 1008 Champlain Building.

Al. Kolker has entered the employ of Juergens & Andersen Company as traveling salesman and will cover Wisconsin, Minnesota and Iowa territory. Mr. Kolker is well and favorably known in the trade from his three years connection with Elmer A. Rich Company.

The Northern Illinois College of Optics is enjoying a good attendance. Students coming from all parts of the country. Among those who have recently matriculated are the following: Max S. Gescheider, of Maryland; Mrs. Long, New York; Frank Stroel, Chicago; Mrs. Bertha Hyman, Illinois; Miss Kellogg, Chicago; Frank H. Mowry, Ohio; Samuel J. Brawley, Wyoming; Charles H. Pfeiffer and Frank Wilkinson, Illinois; P. T. Snyder, Washington; E. E. Muhlheim, Kansas, and Harry J. Rose, Chicago.

C. S. Poole, the well-known and successful jeweler of Joplin, Mo., is now settled in his new and enlarged store and is beginning to feel like the "real thing." The new room is 25 x 100 feet, almost double the size of his old store. It is adorned with elegant new fixtures conveniently arranged and presents an attractive appearance. Mr. Poole's business had outgrown his room several years ago and a larger and more modern store became imperative. We congratulate him on his tasty and elegant sur-

(Continued on page 589)

DIAMONDS

Goods Sent on Selection to Responsible Parties

C. H. Knights & Co.

Columbus Memorial Building

Chicago

Chicago Letter

(Continued from page 587)

roundings and wish him abundant prosperity in his new store.

Frank H. Challen, Chicago and Western agent for the Ohio Cut Glass Company, will cover Illinois, Indiana and Michigan territory during April.

Herbert W. Allen, has just returned from an extended Western trip.

Frederick R. Sheridan, of Arnold & Steere, ring makers, of Providence, R. I., is spending a month at factory headquarters. He does not expect to return to Chicago much before the middle of April.

Rowe Bros., for the past twenty-three years located in the corner store at the northeast corner of State and Monroe Streets, are moving to-day to No. 28 Washington Street, about midway between State and Wabash, opposite Marshall Field & Company, retail. Their old store is to give way to a modern skyscraper office and business building the erection of same to begin soon after May 1st. For this reason this firm's removal was an imperative matter. There seems to be a tendency among retail dealers in single lines to seek the side streets and leave State Street to the big stores with a combination of lines who can withstand the exorbitant rents of that great thoroughfare. Many prophecy that this move will prove a good one for this firm on account of the crowds of lady shoppers that are increasing daily on cross streets like Washington and Madison. The firm have installed handsome new fixtures and the new store is quite an improvement over the old.

A number of visiting jewelers in the city this week were the guests of the Elgin National Watch Company on a trip of inspection through their big plant at Elgin. A. D. Morrison from far away Grand Forks, British Columbia, was the first to avail himself of the Company's courtesy. J. A. Johnson and his son, Martin, of Independence, Kans., came next, followed by Samuel J. Brawley, of Encampment, Wyo., and last was Will J. Thayer, of Gobleville, Mich. All of these gentlemen expressed themselves as having enjoyed a most interesting and profitable day long to be remembered. The various processes of building a watch were new to most of them, so that every minute of their stay at the factory was enjoyed with keen delight.

A. T. Higginbotham, superintendent of the South Bend Watch Company, has been invited to deliver a lecture on the "Watch Manufacturing in America" before the American Horological Society on May 16th at their rooms in this city. The members of this society, and the trade in general, will look forward to this event with pleasure and interest as Mr. Higginbotham bears the reputation of being an able man in his line.

G. J. Hanson, a jeweler of Council Bluffs, Iowa, has succeeded A. A. Boggs as Iowa and Northern Missouri traveler for the William L. Gilbert Clock Company, Mr. Boggs having to resign on account of his invalid wife.

The 1906 catalogue of Henry Paulson & Co., recently issued, is a very interesting and helpful one for jewelers, watchmakers and opticians. It contains 800 pages and over 1000 illustrations, mostly half-tone reproductions from photographs showing their line of tools, materials, jewelers' supplies of all kinds, and optical

goods. It is a handsome book bound in an attractive cover. If you have not already received this catalogue and you are a regular jeweler it will be sent you free of expense if you mention THE KEYSTONE.

The Hahl Automatic Clock Company, 556-8-10 North Halstead Street, Chicago, are just sending out a handsome little booklet illustrating and describing their line of clocks. It can be had upon request and a mention that you saw it in THE KEYSTONE.

Will A. Thayer, of Gobleville, Mich., spent yesterday in Chicago doing some buying and calling on his friends in the trade, and was a pleasant caller at KEYSTONE headquarters. Mr. Thayer brought the news that he had sold out his business to L. W. Terry, formerly of Battle Creek, Mich., who will continue it at the old stand. Mr. Thayer said he was undecided as to his future but that he expected to embark in the jewelry business again soon.

The American Horological Society held its regular monthly meeting in the rooms of the Chicago Jewelers' Association last Wednesday evening. The Secretary read a number of letters from people in the trade in different parts of the country highly commending the minimum price list for watch repairing adopted by the American Horological Society and the Swedish Watchmaker's Society of Chicago, and sent out to the trade by the first named Society. This price list seems to fill a long felt want and has met with immediate favor. We give the list in full elsewhere in this issue of THE KEYSTONE, and urge it upon the attention of our readers. If you want extra copies write C. L. Hofer, secretary, room 801 at 151 Wabash Avenue, Chicago.

Out-of-Town Visitors

C. H. Bagley, manager of the well known jewelry firm of F. D. Day & Company, Duluth, Minn., and Mrs. Bagley, spent a few days in Chicago the early part of the month en route to Bermuda for a six weeks' outing.

C. A. Stevenson and wife, of Holland, Mich., were in Chicago for a few days the early part of the week combining business with pleasure.

H. J. Yahn, of Joliet, Ills., was a welcome visiting buyer in this market the present week.

W. A. Tall, of South Haven, Mich., was a visiting buyer in this market the past week on the lookout for late Easter novelties.

Jeweler Frank Wilde, of Milwaukee, Wis., was in Chicago for a day this week selecting goods for his Easter trade.

Theodore Leif, of De Kalb, Ills., was spending a day in this market the early part of the present week selecting goods for his spring trade.

W. Pfister, of Sheboygan, Wis., was in the Chicago market this week on a buying trip.

E. L. Thayer, of Rockford, Ills., a familiar figure in this market, was here for a day the early part of this week on a buying trip.

A. J. Glaser, of Sublet, Ill., was in Chicago for a day recently on a purchasing trip.

Fessler & Demmel, of Waterloo, Iowa, were represented in this market the early part of the month by Mr. Fessler, who was in the market selecting their spring bills.

J. W. Beach, of Rossville, Ills., was a recent visiting buyer in the Great Central Market.

W. J. Iliffe, the well-known Western jeweler, now located at Dickinson, N. D., spent a few days in Chicago recently combining business with pleasure.

W. Z. Searle and wife, of Petoskey, Mich., spent a day in Chicago recently en route to Moline, Ill., where they expected to spend a week visiting friends.

Henry Plumb, the widely known and pioneer jeweler of Des Moines, Iowa, spent a few days in Chicago the early part of the month attending to some buying and enjoying life in the Western metropolis.

S. H. Avey & Company, of Auburn, Neb., were represented in this market recently by S. H. Avey, who spent a week in Chicago combining business with pleasure.

George L. Goodale, of Lenox, Iowa, spent several days in the Great Central Market doing some buying and brushing up in optics. Mr. Goodale was a pleasant caller at KEYSTONE headquarters while in town.

A. H. Frandsen, the well-known jeweler of Monmouth, Ill., was here last week on a purchasing trip.

W. S. Pitt, of Oelwein, Iowa, spent a few days in this market recently on the lookout for novelties for his Easter trade.

H. G. Butterfield, of Butterfield Brothers, Hamburg, Iowa, spent several days in Chicago recently combining business with pleasure.

Oscar Arnold, head of the Arnold Jewelry and Music Company, of Ottumwa, Iowa, was a welcome visiting buyer in this market for several days last week.

The Hoffman Jewelry Company, of Columbus, Ohio, were represented in this market the past week by Mr. Whitford, who was here combining business with pleasure.

L. N. Le Bron, head of the firm of L. N. Le Bron & Son, of Galena, Ill., was here last week for a day selecting the firm's spring bills.

F. C. Hyde & Co., the well-known jewelers of Appleton, Wis., were represented in the Chicago market the past week by Frank Hyde, the head of the firm, who was selecting novelties for their Easter trade.

C. A. Church, of Belle Plaine, Iowa, spent a day in Chicago recently on a buying trip.

M. F. Goldberg, of Marquette, Mich., was a visiting buyer in this market last week.

Paul Stevenson, of Muskegon, Mich., spent a day in the Great Central Market recently on the lookout for late Easter novelties.

E. H. Carpenter & Son, Burlington, Iowa, one of the pioneer retail houses of the Western country, was represented in this market recently by E. H. Carpenter, the head of the firm who was here on a business trip.

C. A. Weisbrod, retail optician, Oshkosh, Wis., spent several days in the Chicago market recently calling on the wholesale and manufacturing optical trade and doing some buying for the home store.

E. F. Douglas, of Dysart, Iowa, was among the Western buyers in the Great Central Market the early part of the month selecting his spring bills.

Hall & Sayles, the "old reliable jewelry house" of Jamesville, Wis., were represented in the Chicago market by the veteran jeweler, Mr. A. F. Hall, the head of the firm, who was here on a purchasing trip. This firm is celebrating the fiftieth anniversary of the establishment of the business this year. It is one of the oldest jewelry houses in the Badger State and enjoys a fine reputation for square dealing and modern methods in storekeeping. The firm has been quite successful and is to be congratulated upon their fifty years of uninterrupted business. THE KEYSTONE joins with their hosts of friends in the trade in wishing them another half century of progress and expansion.

Jeweler H. S. Miller, of Milwaukee, spent a day recently in the Great Central Market on the lookout for late novelties for his Easter trade.

W. S. Carrow, of Streator, Ill., was in the market for a day recently selecting goods for his spring trade.

C. A. Vanderburg, jeweler-optician, of West Superior, Wis., spent a few days in the Chicago market the early part of the month replenishing his stock.

N. K. Kleiser, of Grand Junction, Iowa, was in Chicago for several days recently doing some spring buying and enjoying the life of a great metropolis.

We want a first-class, experienced traveling salesman for Wisconsin and part of Minnesota. Address, Otto Young & Co., Chicago, Ill.—Adv.

One of Chicago's exclusive watch jobbing houses desires to employ a road man for Wisconsin, Minnesota, Northern Iowa and Illinois territory. The house itself is well established and favorably known and applicants must have good records of their own in the territories mentioned. Address, "Watch Jobber," care of THE KEYSTONE, Room 1201 Heyworth Building, Chicago. —Adv.

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"Meyer" and "QUICK"

IT DOES NOT MATTER WHAT YOU WANT

In the line of Emblem Jewelry, College Fraternity Jewelry, Class Pins and Rings, F. O. Eagle Jewelry, Elk Jewelry, and Badges of all kinds, Diamond Mountings, Diamond Jewelry, Loose Diamonds and Special Order Work, Repairs and Engraving, you can get it from

Meyer and get it **QUICK**

The four thousand and seven hundred Retail Jewelers in the territory tributary to Kansas City will always find us the "Hurry-Up Manufacturing Jewelers for Hurry-Up Dealers." Do business with the people who do business QUICK.

The Meyer Jewelry Company
MANUFACTURING JEWELERS
KANSAS CITY, MO.

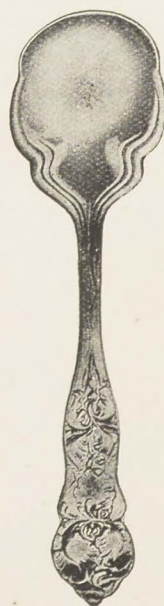
ROCKFORD SILVER PLATE CO., ROCKFORD, ILL.

"Rockford" Silverware is made
for Jewelers only

It is sold by Jewelers only

We never solicit the "promiscuous trade"—we are a little particular about who handles "Rockford ware." Ours is not a free-for-all line—it's a

Select Retail Jewelers' Line Only



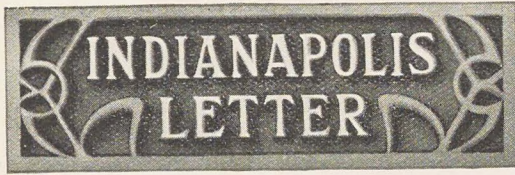
THE "LOUVRE"

pattern, here shown, is probably the heaviest weight blank and boldest die effect of any flatware pattern offered the JEWELRY trade exclusively.

SPECIALLY PLATED NICELY BOXED
DARK GRAY FINISH

WATCHWORD OF THE CRAFT—

"Stand by Those Who Stand by You"



An Imposing Structure

Another handsome structure is soon to be added to the city's rapidly increasing number of costly and beautiful buildings. The plans have just been completed for the new Masonic Temple—York Rite—to be erected at a cost of \$250,000, at the corner of Michigan and New Jersey Streets. The building, which is designed along classic lines in the Greek Ionic style, will be very massive and of monumental character. The entire exterior will be of Bedford oolitic stone. The building done in this city within the past two years has been almost phenomenal and has ranged from humble cottages to mammoth sky-scrapers.

Interesting Trade Statistics

From the city directory for 1906, just issued, it is learned that the watch, clock, jewelry and optical business is carried on in Indianapolis by seven wholesale firms, sixty-six retail firms and eight manufacturing establishments. The wholesale tool and material trade is represented by two firms, the wholesale optical trade by one, while the manufacturing and retail optical firms number twenty-four.

The friends of C. A. Slinger, watchmaker with Ikko Matsumoto, extend to him their sincere sympathy on the recent sad death of his bright little three-year-old daughter, Helen. The happy, laughing child was eating peanuts when one lodged in her throat, a physician was immediately called and every effort made to relieve her, but before the nut could be removed death from strangulation occurred.

The 800-page tool and material catalogue, just issued by the jobbing house of S. T. Nichols & Co., is one of the largest and most complete publications of its kind ever presented to the watch trade. The firm has every reason to be proud of it as it is indicative of their splendidly equipped establishment in the State Life Building.

The Cain Optical Co., J. A. Cain, manager, has recently opened retail optical parlors on the sixth floor of the State Life Building. Mr. Cain at one time represented the jobbing house of S. T. Nichols & Co. in Indiana, and has had much experience in the optical business.

W. H. Newby, one of the city's oldest and best-known watchmakers, now has his work bench in the Conlen Loan Office, at 119 W. Washington Street.

George Harrington, book-keeper for the Baldwin-Miller Company, is back at his post after an absence resulting from painful injuries sustained in a fall down the cellar steps at his home.

Tony Bruning, one of A. P. Craft Manufacturing Co.'s workmen, joined the order of Benedict last month. His fellow-workmen celebrated the occasion by tendering him a farewell bachelor supper, where Roy Neighbors, the firm's city man, covered himself with honors as toast master and fun maker.

Edwin M. Craft has returned from a business trip to Chicago taken in the interest of A. P. Craft Manufacturing Co.

Chris Bonnett, who learned watchmaking in his native town of Pforzheim, Germany, is now located with George A. Fogas, 546 Massachusetts Avenue.

Greater Space Needed

The rapid growth of the city and the great advance in rentals, coupled with an unwillingness to move from the very heart of the old retail district has forced the merchants to make use of every foot of space in their store-rooms. Carl L. Rost on North Illinois Street has taken three of his watchmakers off the main floor. Two have their benches in the balcony running across the rear of the store and one has been placed over the front show window. H. Cohen & Sons on North Pennsylvania Street have provided space over the safe and office at the rear of the store where two watchmakers have plenty of room, undisturbed quiet and good light and ventilation. Horace A. Comstock, on East Washington Street is remodeling his store so as to gain sufficient room to sub-let one side.

Lon R. Mauzy, on Massachusetts Avenue, has snug quarters where everything is ship-shape and in convenient order. His room is triangular in shape with a broad street front and two good sized show windows. The show cases run back to the small angle over which Mr. Mauzy has just built a balcony which constitutes his office. A basement under the room furnished a good workshop where, by an ingenious placing of mirrors, a view of the entire store room and entrance can be had at all times.

F. M. Herron quite recently purchased two residence lots on Deloss Street.

Chris Bernloehr has become the owner of a business site on Massachusetts Avenue, where he contemplates erecting a store room.

E. Mantel, a West Washington Street jeweler, is making improvements on property owned by him on Pearl and Maryland Streets.

Interesting Jewelry Exhibit

The jewelry exhibit made in March by the Arts and Crafts Society, 21 East Ohio Street, was of special interest in that it showed the direction in which art in jewelry is tending and demonstrated the increasing demand for original designs and unique ornaments turned out by the individual metalsmith and jeweler. Most of the pieces exhibited were of semi-precious stones artistically mounted in hand-wrought settings. There were gold and silver necklaces, with rare stones of odd forms set in unique designs, the fanciful conception of art-craft, for pendants. Brooches, belt buckles, watch cases and all sorts of articles for personal adornment. The contributors were from all parts of the country as well as from the city. The studios of Boston, Chicago and California sent beautiful examples of metal-work, enameling, stone mounting and artistic designing. The exhibit was unique in the history of art in this city and attracted much attention.

George S. Drake, a salesman with Tiffany & Co., New York, recently paid a visit to old friends in Indiana. After selling his jewelry store at Pendleton, Ind., about two years ago, Mr. Drake went to the Pacific coast and later to New York. While enjoying the many advantages of life in the great Metropolis, Mr. Drake has remained loyal to Hoosierdom, where he is always welcome.

Alfred F. Potts, retiring president of the Indianapolis Commercial Club, has been presented with a handsome silver loving cup by the directors of the club. The cup was furnished by Charles Mayer & Co. and beautifully engraved by John Dyer, the firm's skilled engraver.

Wiggam & Bros. removed March 1st from South Illinois Street to Virginia Avenue, within a few doors of their first location.

A huge canvas sign over the doorway of Burton Bros., 11 North Meridian Street, announces a special watch sale during March, of all new and unredeemed watches. The firm conducts a retail jewelry and loan business.

Charles Snively celebrated his 13th anniversary in the jewelry business at 347 West Washington Street, March 1st, and reports the year just passed as the best he has ever experienced. Sales continue good and work plenty. Joseph Head fills the position of watchmaker with Mr. Snively.

W. A. Lorentz, 30 South Illinois Street, has found business universally good since the opening of the year. During February and March he had several nice diamond sales. Watchwork has been unusually brisk.

Newlin & Schmeltz, 28 South Illinois Street, local agents for the Grand Rapids Show Case Co., anticipate a fine Spring trade judging from the orders and inquiries they have received, from all over the State, for jewelry and optical show cases. There seems to be a general fixing up and refitting among both city and country jewelers.

Leopold Krauss, of Krauss & Sector, North Illinois Street, is proprietor of the Star Loan Office, at 305 West Washington Street.

Nestor of the Local Jewelry Trade

Julius C. Walk is one of the few active business men of today whose name appears in the first city directory of Indianapolis, issued in 1855. There it reads, Julius Walk, clerk, 51 West Washington Street. He was born in 1840 on the second floor of a little two-story brick building on the corner of Washington and Meridian Streets, only a few doors from his present business location. Having reached the age of fourteen and feeling the necessity of earning his own living, Julius Walk apprenticed himself to George Feller (father of Louis Feller, jeweler and watchmaker, at 420 East Washington Street), who was at that time the only practical watchmaker in the city. He was employed at the trade of watchmaker in this city and for brief periods in Evansville, Ill., Terre Haute, Ind., Dayton, Ohio and Nashville and Fayetteville, Tenn. Returning in 1863 to Indianapolis he took a position with W. P. Bingham, a watchmaker and jeweler at the corner of Pennsylvania and Washington Streets until 1877 when Mr. Bingham failed. Then Mrs. Bingham, Mr. Walk and James N. Mayhew formed the firm of Bingham, Walk & Mayhew and bought the store of J. H. Colclasier at 12 East Washington Street. In 1892 Mr. Mayhew retired and Mr. Walk purchased Mrs. Bingham's interest. One year later his son Carl F. Walk, became his partner and the firm name has since been Julius C. Walk & Son. As far as known Mr. Walk has had the longest career as a business man on Washington Street of any now living and is one of the most popular and best known citizens of Indianapolis. The firm stands at the head of the jewelry business in Indiana. Mr. Walk is a member of the Board of Trade, Commercial Club, Merchants' Association, German House, Knights Templar, Scottish Rite and Mystic Shrine. On the 4th day of the present year Mr. Walk celebrated his 66th anniversary and, although his hair is perfectly white, he is erect, active and a clear-headed business man who has kept abreast of the rapid improvements in the city. There isn't a better fisherman or a more enthusiastic amateur gardener in the city than genial "Uncle Julius."

The store of B. C. Lett at Surprise, Ind., was recently entered by thieves who carried off \$100

(Continued on page 592)

Indianapolis Letter

(Continued from page 591)

worth of jewelry. A hole large enough to admit a hand, had been cut in the back door and the lock unfastened.

Mrs. Alice Rossier, widow of the late Henry Rossier, of Martinsville, Ind., has been visiting friends in this city. Mrs. Rossier recently sold her interest in the Rossier jewelry store to her step-son, Emil, who will continue at the old stand on the West side of Martinsville Public Square.

Smith & Ward is the name of a new jewelry firm at Greenfield, Ind., formed by the consolidation of the stocks formerly owned by Geo. H. Cooper, whose store was popularly known as the Old Davis Store, and Smith Bros. February 14th the business passed into the hands of J. Henry Smith and W. C. Ward, who recently removed from Kentucky. Jewelers J. M. Washburn of Anderson and G. A. DeCamp of Shirley, Ind., were called upon to appraise the two stocks.

D. Roetger, Huntingburg, Ind., has removed his jewelry store into better quarters just east of the post office.

J. A. Simpson of Richmond, Ind., has opened a first class jewelry store at Ripley, Ohio. He still retains his store at Richmond which, for the present, will be in charge of his wife.

R. W. Clark, of Lawrenceburg, Ind., has returned from a purchasing trip to Cincinnati.

Thomas W. Wright and wife, Anderson, Ind., have conveyed to the Wright-Rich Cut Glass Co., of that city, the real estate on Ohio Avenue occupied by the company's factory.

A. B. Wahl, jeweler, of Lafayette, Ind., was in the city recently on his return from a business trip to Cincinnati. Mr. Wahl has a branch jewelry and phonograph store on South Illinois Street, this city.

Z. Bauchert, of Wolfville, Ind., and Levi Abrams, of Point Deposit, Ind., were recently enrolled as students at the Philadelphia College of Horology.

Two of Indiana's enterprising jewelers, J. G. Laupus, Seymour, and R. E. Dale, Bedford, were recently admitted to membership in the Jeweler's Security Alliance.

Either as students or graduates the following Indians were in attendance at the recent Alumni meeting of the Northern Illinois College of Ophthalmology held in Chicago: Walter Beer, Versailles; J. E. Wuersten, Montpelier; Lawrence Faris, Marion; Theophilus S. Jesse, Valparaiso.

The addition of several pieces of new machinery and an increase in the working force has considerably enlarged the capacity of the Ontario Silver Co., Muncie, Ind.

J. M. Bigwood, a Terre Haute, Ind., jeweler, is enjoying a pleasure trip and rest in the sunshine of Florida.

Frank Glab, a well known jeweler of Shelbyville, Ind., is contemplating retiring from business until he can regain his health. For some time Mr. Glab has felt the necessity of getting away from business cares.

The many friends of Herman Lodde, Lafayette, Ind., will be glad to learn of his improvement in health. Mr. Lodde was too ill for several weeks to attend to business.

Jeweler S. N. Jenkins, of the Quaker town of Richmond, Ind., started the first of March for Mexico, where he will spend the next two months.

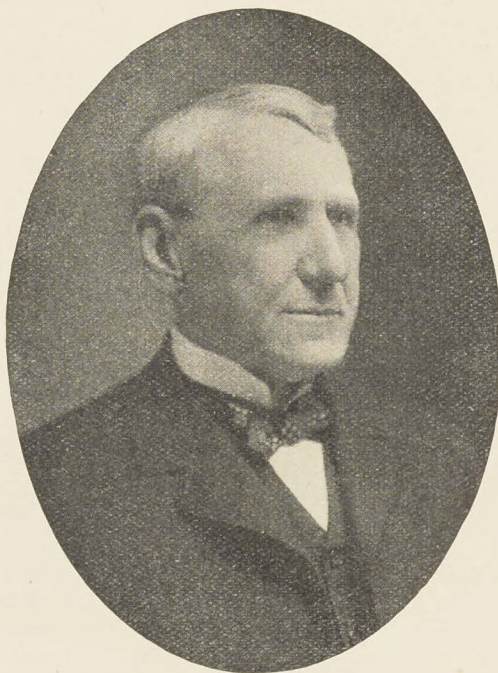
The employes of the South Bend Watch Co., South Bend, Ind., gave an elaborate ball that was largely attended Feb. 23d. They hope to make the ball an annual event.

A claimant has turned up for the hand-wrought solid silver cup purchased by Jeweler H. H. Tislow, of Petersburg, Ind., from a tramp who said he had found it at an abandoned gypsy camp and which bore the inscription, "Indiana State Fair, Premium 1857." Mrs. Virginia Bailey, an aged and respected resident of Bedford, Ind., had a similar cup stolen from her in the early sixties and never heard of it until she was told of Mr. Tislow's purchase.

An Interesting Relic
While excavating for a boathouse on the banks of the river near Elkhart, Ind., a silver cross, believed to be a relic of the famous mission posts maintained by the Catholic

Church some 300 years ago, was recently unearthed. There have been at long intervals several similar crosses found buried in that historic section of Indiana. They were all made of pure silver, light rather than massive in construction, weighing a little over 400 grains. In size they were about five inches long with double arms marked with rude lines or engravings. One of the arms is near the middle and the other near the top, both about three inches in length. They are undoubtedly what are called "Lorraine Crosses," and have also been found around the old mission posts in Canada. The one just found near Elkhart was buried in a bed of gravel surrounded by a quantity of darker and finer soil that represents all that remained of some person's final resting place, most likely a person of high ecclesiastical dignity among the French Jesuits.

Charles L. Schmidt will remove his optical establishment from 48 East Washington to 137 North Pennsylvania Street, in the Denison Hotel block, April 1st. The room, which is being tastefully decorated and furnished, has the main en-



SILAS BALDWIN

trance on Pennsylvania Street, and two doorways leading into the Denison Hotel lobby. Mr. Schmidt was for a number of years with Leo Lando, but for the past year has been in business for himself, occupying a part of the jewelry store of H. A. Comstock.

J. W. Thompson, Danville, Ind., and Henry A. Winn, Brightwood, Ind., came to this city to attend the funeral services of Captain Silas Baldwin.

Geo. W. Keifner, who recently sold his jewelry store at Loogootee, Ind., is now representing the wholesale tool and material house of Hoffman & Lauer, State Life Building, in Indiana and Illinois.

Local travelers tell us that J. B. Dennis, of Williamsport, Ind., is looking mighty fine in his new room, which is well adapted to the needs of a jewelry store.

Herman B. Lodde, Lafayette, Ind., has had his wall cases fitted with electric lights.

E. O. Collins, the well known and successful jeweler of Franklin, Ind., spent a day in this city last week on the outlook for Spring novelties. Mr. Collins reports trade in his section as "the best ever" and contemplates removing into larger quarters as soon as he can find a room suitable to his business.

Aaron Pursel, an enterprising Hoosier jeweler, of Noblesville, has returned from a trip South. He made extensive purchases in timber lands in the State of Louisiana.

F. T. Harmon, Scottsburg, Ind., reports trade so good that he has had to engage a watchmaker to look after that branch of the business.

The many friends of Jeweler T. M. Jackson, Seymour, Ind., will be pleased to learn of his return to business after a long illness.

H. O. Huber has opened a jewelry store and manufacturing business in South Bend, Ind.

Thomas New, recently of Greenfield, Ind., has purchased the jewelry business of D. P. Armer, Richmond, Ind. Mr. Armer has removed to Greenfield and, in connection with C. A. Crider, will conduct a retail jewelry store.

Death of Silas Baldwin

It is with sincere regret and deep sympathy we announce the sudden death of Captain Silas Baldwin, president of the wholesale house of the Baldwin-Miller Company, Indianapolis, on March 7th, at the home of his son-in-law, Enrique C. Miller, 1020 North Delaware Street, that city, where he and his wife were staying during the temporary absence of both Mr. and Mrs. Miller. The former was in Mexico and the latter in Camden, S. C., where she had taken her son for his health. While never of a very robust or vigorous constitution Capt. Baldwin was in his usual health until Sunday night when he was seized with an attack of acute indigestion. His illness was not regarded as serious until Tuesday when heart failure developed and at 7.20 P. M. Wednesday he passed away. His wife and granddaughter, Miss Marion Miller, and his business partner, Jos. E. Reagan, were at his bedside.

Captain Baldwin was born May 24th, 1834, and came to this city from Toledo, Ohio, in 1882 and soon after established the wholesale jewelry firm of Baldwin-Miller & Co. For the last quarter of a century he was closely associated with the business life of this city, and for several years and at the time of his death was president of and actively connected with the Baldwin-Miller wholesale jewelry house with offices in the State Life Building. Before coming to Indianapolis he was in the banking business in Bellfontaine, Ohio, and for several years was a member of the wholesale notion firm of Baldwin, Shaw & Co., Toledo, Ohio. He saw active service during the Civil War, having enlisted with an Ohio regiment.

Captain Baldwin was a member of the Loyal Legion, the Grand Army, the Board of Trade, Commercial Club and of the board of directors of the Central Trust Company. He was very prominently identified with the Meridian Street M. E. Church. He left a widow to whom he was married for nearly 49 years, one daughter, Mrs. Enrique C. Miller and two grandchildren, Marion and Roy Miller.

Silas Baldwin's death is mourned by a large circle of friends both within and without the trade. Noted no less for his unobtrusive manner, gentle courtesy and amiable disposition than for his integrity and upright principles, he was highly respected by all who had business or social relations with him.

The Indianapolis jewelers attended, in a body, the funeral services which were held at the home of E. C. Miller. The burial, which was at Crown Hill Cemetery, was postponed awaiting the arrival of Mr. Miller who met with several unlooked-for delays on his long trip from Mexico. Among the floral offerings was a magnificent blanket of flowers the gift of the city jewelers.

Carl L. Rost presided and H. A. Comstock acted as secretary at a meeting of the wholesale, retail and manufacturing jewelers of the city to take action regarding the death of Capt. Baldwin. The following memorial was drafted and a copy sent to the family.

"Whereas, by the infinite wisdom of God, our friend and associate Silas Baldwin, has been taken from our midst,

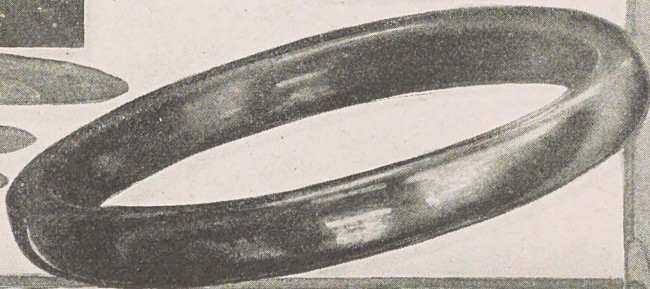
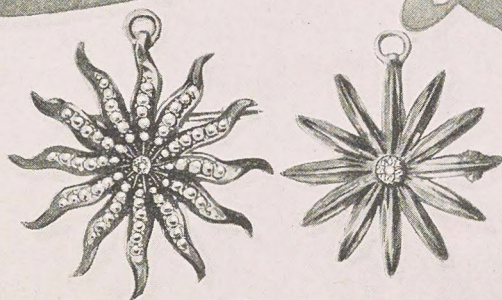
"We, the jewelers of Indianapolis, in body assembled, in order to express our love and friendship for a man most honored and respected, and one in whom the utmost confidence was reposed, and whose cheerfulness won for him the high regard of all with whom he came in contact, do hereby offer our heartfelt sympathy to those by whom his loss is most bitterly felt.

"CARL L. ROST,
"A. P. CRAFT,
"H. A. COMSTOCK,
"CHAS. LAUER,
"Committee."

Stern Bros. & Co.



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THE CHARM OF BEAUTY

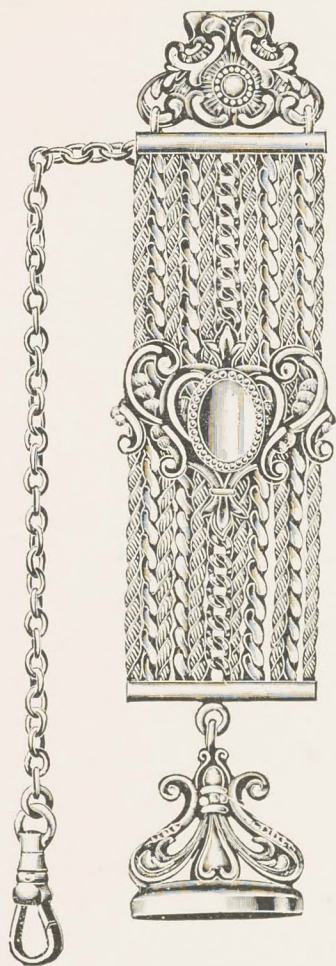
Nothing more charming in design and perfect in workmanship than our jewelry. Our assortment of bead necklaces, bracelets and brooches, embraces the widest scope of selection, as well as the newest ideas. **HIGH-CLASS JEWELRY AT POPULAR PRICES.**

STERN BROS. & CO., 33-43 Gold Street, New York

SALESROOM AND OFFICES
Diamond Department
68 Nassau Street, New York

DIAMOND CUTTING WORKS
142 West 14th Street, New York

BRANCH OFFICES
103 State Street, Chicago
29 Ely Place, London
12 Tulp Straat, Amsterdam



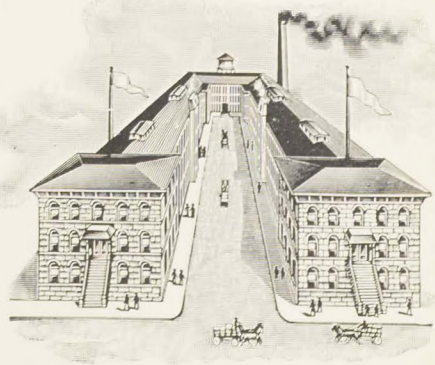
DESIGN, WORKMANSHIP, QUALITY and DURABILITY are the four factors which have made the BIGNEY CHAINS the most popular in the market to-day. They are handled and worn by more people than any other make.



S. O. Bigney & Co.

Factory: Attleboro, Mass.

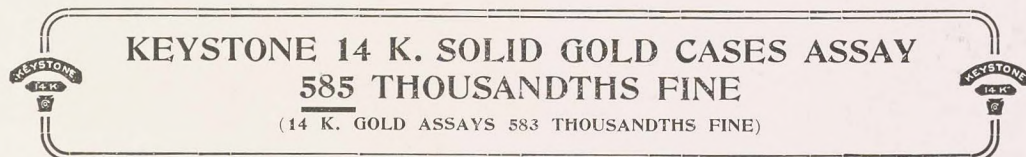
New York Office: 3 Maiden Lane





“THE BOURBON”

A Model of Very Imposing Appearance, combining graceful outline with superior strength



Note this warrantee in cap

GUARANTEED
14 K.
FINE
THE K.W.CO.

A Variety of Patterns especially adapted to “The Bourbon” style of case construction.
“The Bourbon” is made with plain centers only, harmonizing perfectly with designs on backs.

THE KEYSTONE WATCH CASE COMPANY

New York

Chicago

PHILADELPHIA

Cincinnati

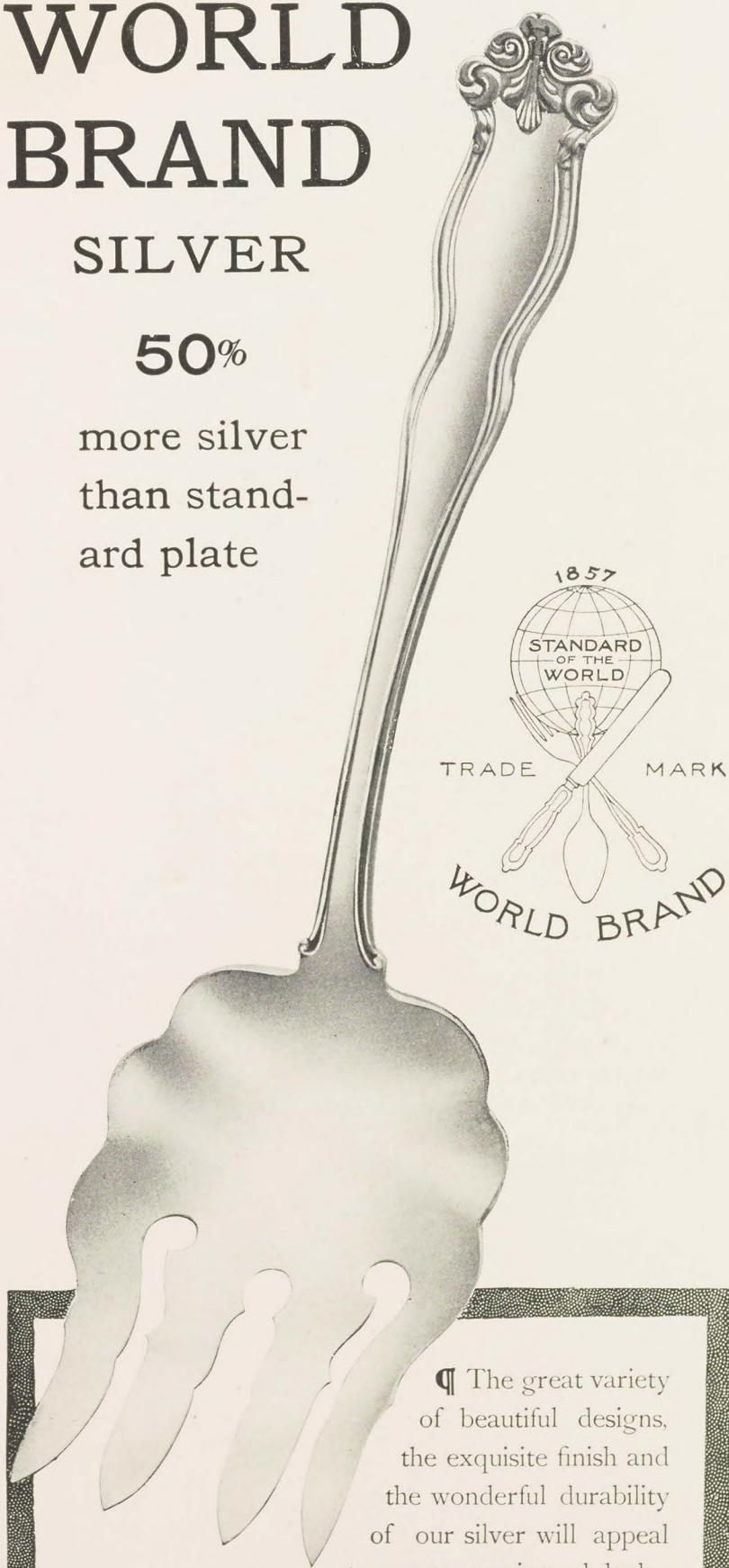
San Francisco

Made in 16 and 0 Sizes
Hunting only



596
**WORLD
BRAND
SILVER**

50%
more silver
than stand-
ard plate

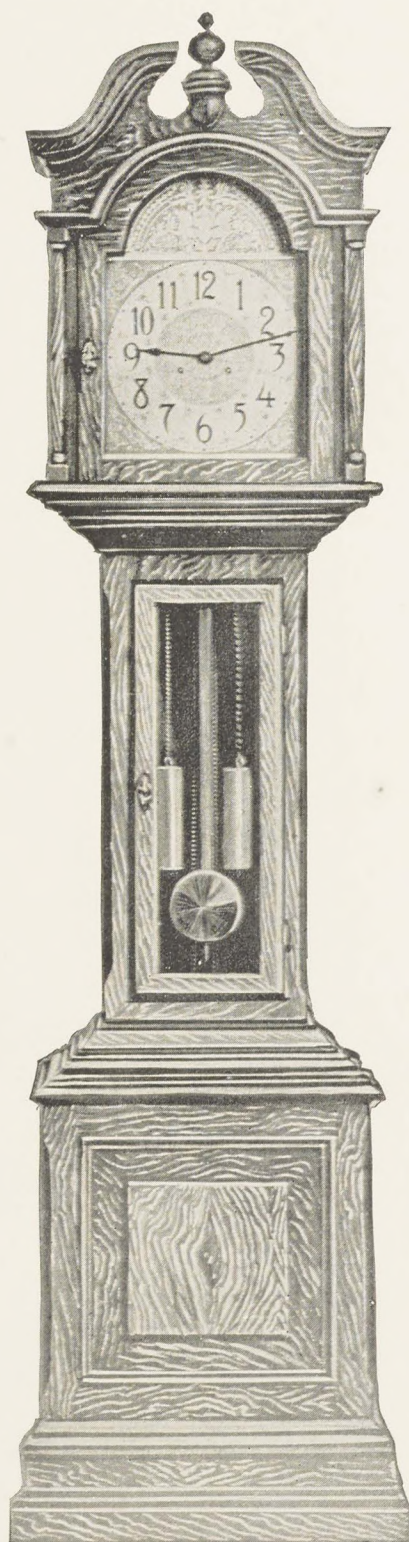


¶ The great variety of beautiful designs, the exquisite finish and the wonderful durability of our silver will appeal to every experienced dealer who looks over our line. ¶ Write for trade catalogues, with "costs you" prices. Factory shipment as low as \$10.

The American Silver Company
BRISTOL, CONN.

46 West Broadway, New York

Silversmiths' Building, Chicago, Ill.



No. 100. Solid Genuine Mahogany. Solid Selected Quartered Oak

Price, **\$100.00**

Brass Dial. Clock 8 feet 2 inches high

ITHACA CALENDAR CLOCK COMPANY

ITHACA, N. Y., U.S.A.

Manufacturers of Perpetual Calendar Clocks
and Standing Hall Clocks

Established 1865

Catalogue on application

Winter Banquet of the New England Manufacturing Jewelers' and Silversmiths' Association

The winter banquet of the New England Manufacturing Jewelers' and Silversmiths' Association was held in "The Wellington" Providence, R. I., on Saturday evening, March 10th. Attended with all the generous hospitality for which the association is noted, it was a night long to be remembered by those who were so fortunate as to be present, either in the capacity of members or guests. Success of a most gratifying nature has always crowned the association's efforts in the matter of entertainment, but all the enjoyment of past banquets was surpassed by the achievement this year.

Although the decorations were of a more subdued order than those of the preceding year, the artist's hand was everywhere pleasingly in evidence. Flowers were predominant in the decorative scheme; handsome bouquets of multi-colored pinks and tulips were arranged on each table, the embellishment of the table of honor being especially profuse.

According to programme, a reception was held from 6 to 6.30, and dinner was served at 6.45. The menu card was a most unique creation, bound in a cover of dark green, the upper left-hand corner bearing the seal of the association engraved in silver, while the frontispiece consisted of a picture of William A. Copeland, president of the association. The cuisine was well calculated to flatter the epicurean palate, and was manifestly enjoyed by the members and guests—four hundred and eight, all told. Seated at the guests' table were the following:

His excellency, George H. Utter, governor of Rhode Island; Hon. Adin B. Capron, congressman from Rhode Island; William A. Copeland, president of the association; Hon. Arthur W. Dennis, speaker of the Rhode Island House of Representatives; Hon. George W. Gardiner, collector of Providence port; Hon. George A. Littlefield, Providence, toastmaster; Frank T. Pearce, of the honorary committee; Hon. William K. Reynolds, president of the board of aldermen; Rev. Dr. Willis Scott, Worcester, Mass.; Leopold Stern, New York; Hon. William H. Sweetland, presiding justice of the Rhode Island superior court; Henry G. Thresher, chairman of the honorary committee; Hon. Charles A. Towne, congressman from New York; Charles P. Bennett, Rhode Island, secretary of State.

When the gastronomic part of the programme had been concluded, President Copeland, in an appropriate speech introduced Hon. George A. Littlefield, toastmaster of the evening. Mr. Littlefield disavowed any intention of making a lengthy speech. He interspersed his address with several witty stories, which immediately put the house in excellent humor. He then proposed the first toast of the evening, "Rhode Island," which the assemblage duly honored, and he afterwards introduced Governor Utter, the first speaker of the evening.

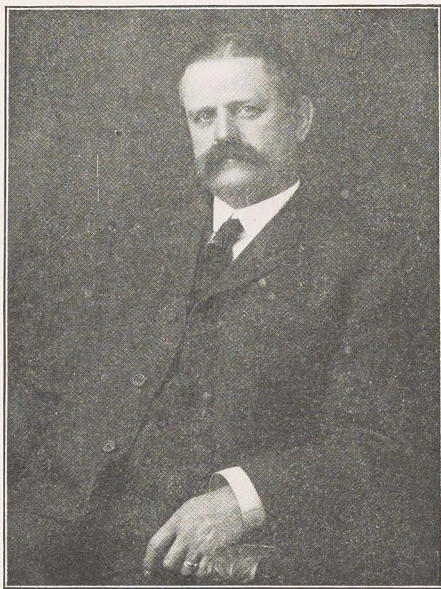
The chief executive said that there were two things that every man in the association had learned, one was that the jeweler must have something that one could sell, another was, that he cannot be behind hand in bringing his goods to the attention of the public.

"Every man must find that the changed conditions not only in trade but in State affairs require that he must be alive and up-to-date. When you find a man who meets a condition and faces it, that is the man you want to tie up to. Let no man throw discredit upon this State. Let every man

here protect the State, her honor and all that pertains thereto."

"The City of Providence" was the next toast. Mayor Dyer was down for the speech, but owing to illness he was unable to be present. Mr. Littlefield introduced in his place Alderman Reynolds, of the Fifth Ward. The speaker said that the Providence jewelers were large factors in the welfare of the city, and he called attention to the fact that the various manufacturers there employed no less than six thousand persons. He extended a cordial greeting from the city, in his capacity as acting mayor, and hoped that next year would again see the association reassembled at the festive board.

Leopold Stern, of L. Stern & Co., New York, who was the next speaker, called attention to the phenomenal growth of the jewelry and precious stone business within recent years, and reviewed the import and export trade. In closing, he said that the splendid protective tariff and the excellent financial condition of the country at the present time accounted for the rapid increase in the prosperity and expansion of the jewelry trade



Frank B. Reynolds

The toastmaster paid a splendid tribute to the next speaker, the orator of the evening, Congressman Towne, of New York, and his eulogistic introduction was supplemented by some brief remarks in a similar vein from Congressman Capron. Mr. Towne opened with a number of excellent stories, expressed his gratitude at being in Providence, because he was then, he said, nearer to the great educational institution which developed J. B. Angell, president of Michigan University, which, years ago, he attended. Continuing, he said:

"My friends, I come to you to-night with no prepared speech. I do not know what to say. I want to say that I have another reason for coming to Providence and that is to meet my constitutional friend, Mr. Capron. My friends, your organization extends away back to the middle ages. Your trade is one of the great outgrowths of the feudal system. It is interesting to reflect that when the dwellers of the town got rich they were able to get protection. They could demand from the kings certain rights. You exist to-day because you have a high regard for the rights and privileges of other men pursuing the same objects. Speaking of your prosperous growth recalls the great growth of other modern industries. It is entirely a question of fact as to what your policy should be. Everything depends upon existing conditions. The welfare of the peo-

ple is the first object of practical concern of the men you elect as statesmen. It has been the mission of the people of the United States to make more each day of the principles which Thomas Jefferson set forth. Our composite nationality is the result of the progressive enterprise brought about by the immigration to this country of all those people who left the shores of the old world to seek a refuge here. We are our own arbiters. In institutions God has enabled us to become our own fashioners of the present condition of things.

"It is the greatest thing in the world to be an American citizen. We can leave everything to straighten itself out on the fundamental principles of honesty which lie at the foot of American citizenship. I agree with the idea of material helpfulness of the home market. I do heartily believe in extending the foreign trade of the United States. I do not believe, however, in extending the foreign trade to the detriment of the home market. I do not wish to diminish the importance of foreign trade.

"I wish to emphasize the fact that home trade is far better. It does not follow that because you have exported more than you have imported you are getting rich. The true economy is to stimulate your home manufactures. The object of any business should be to stimulate the home product. Our country is the first that has striven to inculcate this idea in the minds of its people. But these ideas must be extended still further in order to bring about that condition of affairs which our forefathers strove for years ago. The gold supply has increased fast enough to maintain prices."

The post-prandial exercises were closed with a speech by Rev. Willis Scott, D.D., of Worcester. For fully ten minutes the speaker waxed witty, telling numerous impromptu jokes and convulsing his hearers with laughter. Dr. Scott dwelt considerably on the part which enterprises played in modern life. He said that the law of the survival of the fittest never applied more effectively than at the present time.

The proceedings terminated with the singing of "Auld Lang Syne."

Each diner was given a souvenir consisting of a miniature glass crucible, emblematic of the jewelers' trade. Select music was rendered by the Wellington orchestra, and the arrangements were admirable, thanks to the executive committee, of which Frank B. Reynolds, of the Cory & Reynolds Co., Providence, was chairman. The trade in the Attleboros and other New England towns was numerously represented.

Annual Meeting of the American Retail Jewelers' Association

The American Retail Jewelers' Association will hold its next annual meeting in August at Rochester, N. Y. The selection of the time and place is due to the fact that the American Association of Opticians will hold its annual meeting in the same month and city, and it is anticipated that the dual attraction will result in a largely-increased attendance. The secretary of the association, Edward R. Roehm, Chamber of Commerce, Detroit, Mich., will be pleased to have suggestions from those who are interested.

The idea of selecting the same or nearly the same dates and location for the jewelers' and opticians' meetings is an excellent one, as it will certainly increase the attendance, many of the members of each organization being interested in both branches.

MAKERS AND SELLERS TO THE JOBBERS

RINGS
BROOCHES
MOUNTINGS

SOLID GOLD

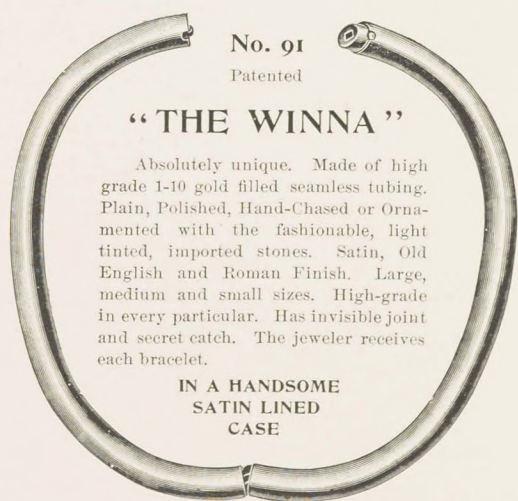
MADE CAREFULLY
MADE HONESTLY
NO CASTING

A complete line of GOLD FILLED RINGS including the popular THREE CROWN

OSTBY & BARTON CO.

CHICAGO, 103 State Street
NEW YORK, 13 Maiden Lane

PROVIDENCE, R. I.



"THE WINNA"

Absolutely unique. Made of high grade 1-10 gold filled seamless tubing. Plain, Polished, Hand-Chased or Ornamented with the fashionable, light tinted, imported stones. Satin, Old English and Roman Finish. Large, medium and small sizes. High-grade in every particular. Has invisible joint and secret catch. The jeweler receives each bracelet.

IN A HANDSOME
SATIN LINED
CASE

**HIGH-GRADE
WRIST ORNAMENTS**

We present our TWO LEADERS
FOR 1906

and submit for your approval

"THE WINNA"

and

"THE BATES"

Both newly patented
First over the line for 1906
Buy Our Goods and YOU BUY
THE BEST

Our output this season comprehends more and better products than ever before. It includes many new and handsome designs in Gentlemen's Vests, Dickens, Ladies' and Gentlemen's Fobs (with Gold Bottom Seals), Lorgnettes, Neck Chains, Chatelaines and Lockets.

Our goods serve as models which all may well imitate but which none can surpass.

Established 1867

BATES & BACON

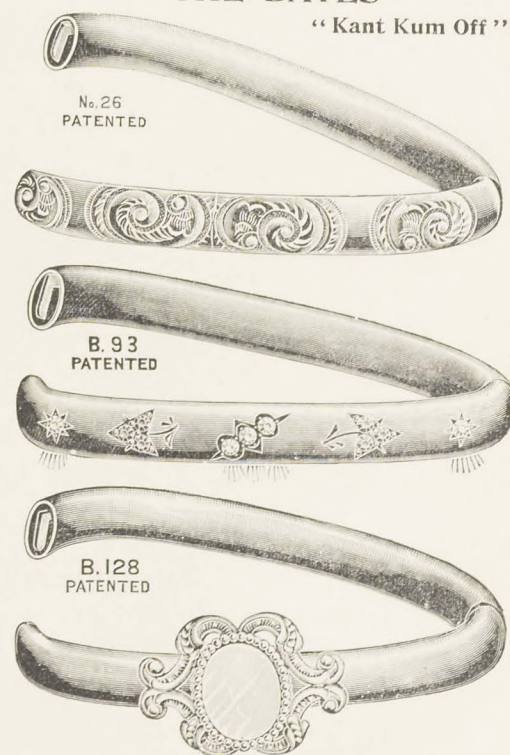
Manufacturing Jewelers

NEW YORK OFFICE—9 Maiden Lane
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Factory, Attleboro, Mass.

"THE BATES"

"Kant Kum Off"



THE "BATES" BRACELET
"Kant Kum Off"

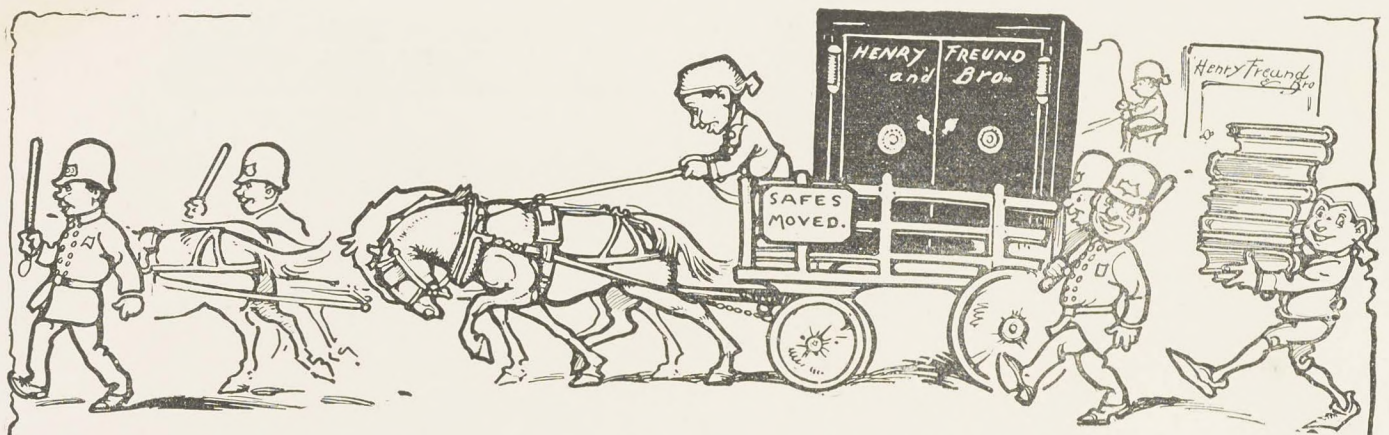
Standard for Beauty, Durability and Mechanical Skill. The joint is invisible and the catch is a patent secret fastening which no accident will ever open, and with which no other bracelet is equipped. Only a few of our many beautiful patterns can be shown here. We have them artistically chased or beautified with the most fashionable colored stones; finished plain-polished, satin, Old English and Roman; in large, medium and small sizes.



Heintz Rings are stamped **HB**. This stamp is an absolute assurance of Ring Perfection. Judicious buyers enter our product first on their list for the reason that it is the most profitable Ring production in this country. The active Retail Jeweler—preparing for Spring trade will add to his sales and his season's profits, if he includes in his stock an assortment of **HB** Rings. Memorandum selection sent to responsible concerns. Correspondence solicited.

HEINTZ BROTHERS

Buffalo, N. Y.



We needed the room, so made arrangements to give up our quarters in the "Jewelers' Building" and will move to much larger offices on the **TWELFTH FLOOR** in the new "**COCKCROFT BUILDING**," cor. **JOHN and NASSAU STS.**, about April 23d. Moving always upsets things, but we will be ready at any time to fill your orders promptly, and after we occupy our new premises, will be pleased to welcome all our friends there. Ample room will be at your disposal and every convenience, and we shall appreciate your making our office your headquarters whenever you visit New York.

HENRY FREUND & BRO.

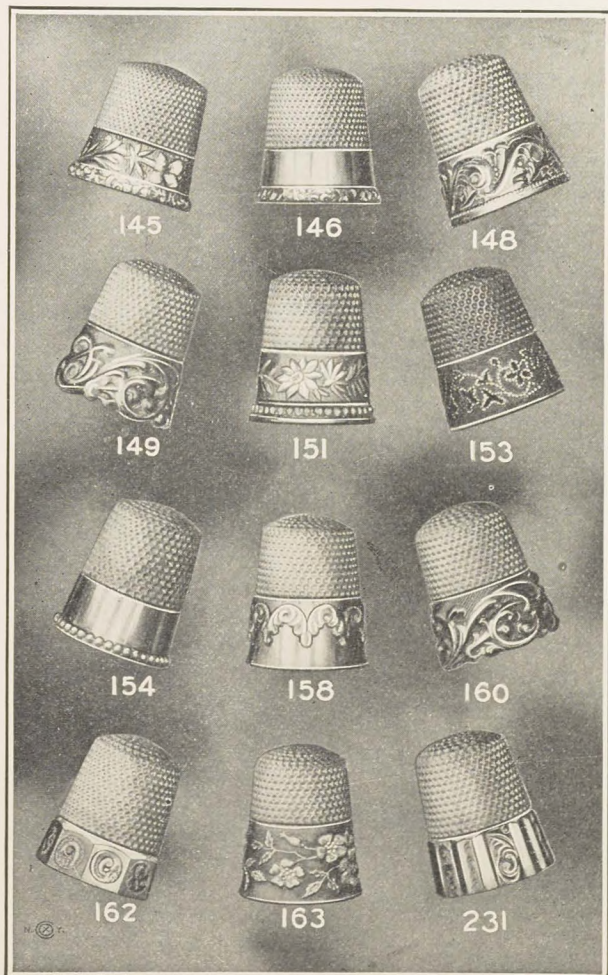
DIAMONDS, WATCHES and JEWELRY

ELK and EAGLE GOODS a Specialty

9 Maiden Lane, NEW YORK

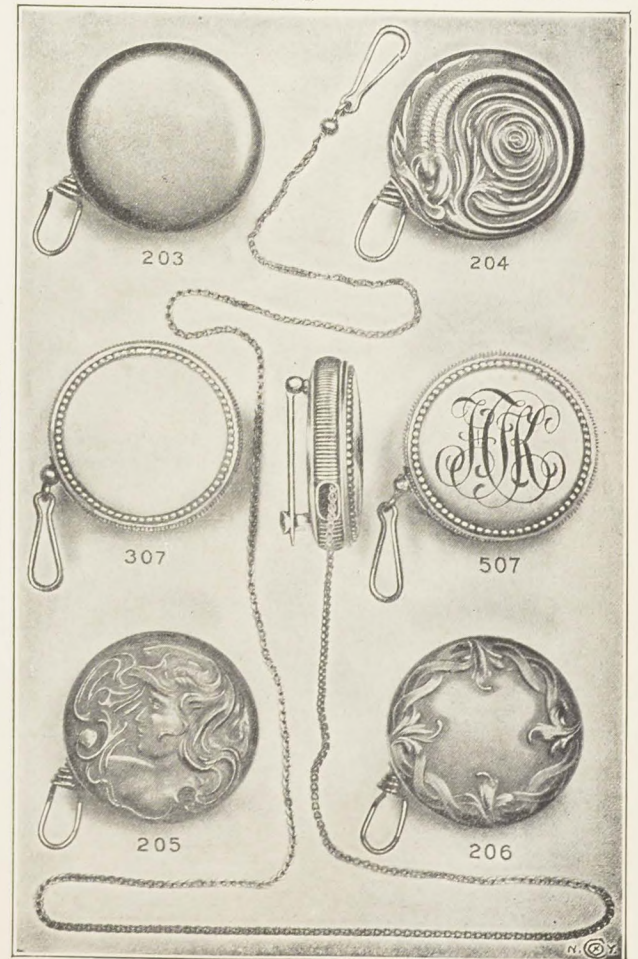


GOLD AND SILVER THIMBLES

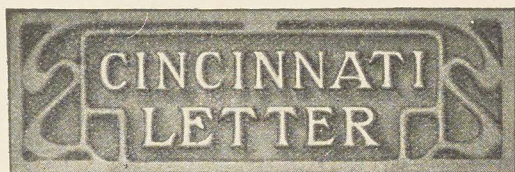


ESTABLISHED 1892
KETCHAM & McDOUGALL
 MANUFACTURERS
 GOLD & STERLING SILVER THIMBLES
 AUTOMATIC EYEGLASS HOLDERS
 37 AND 39 MAIDEN LANE, N. Y.
 SEND FOR CATALOGUE "E"

The Automatic Eyeglass or Pencil Holder



Made in Gold, Silver, Rolled-Plate, Gun Metal, Royal Copper and Black Enamel. Samples sent upon request



A Temporary Lull The conditions of the local retail trade have been comparatively favorable during the past month, considering the season of the year. A considerable amount of high-class repair work has been done by the jewelers, but the volume of actual business has fallen off considerably. This condition was expected almost a month earlier than it came and as a result the month of February and a part of March resulted in more favorable reports being made than was to have been expected. The present quiet is not likely to last long and may be said to be due in great measure to the several weeks of miserable weather which the Ohio Valley and Southeastern States have been experiencing during March. Wholesale houses report a good volume of orders for the coming season, calling for high-grade stocks and supplies.

The Duty on Agate

Judge Albert Thompson, of the United States circuit court, has just rendered a decision in which he declares that agate which is used for bearings in scales, etc., is a jewel, and as such is liable to duty. The decision was handed down in a case in which the court here reverses the findings of the United States board of customs appraisers at New York City. A computing scale company, of Dayton, had imported a large quantity of agate to be used for bearings, and an ad valorem duty of 50 per cent. had been assessed by the customs officers at New York, on the ground that the agate was a jewel and as such was subject to the special import duty. The scale company appealed to the New York board of appraisers, which reduced the assessment from 50 per cent. to 10 per cent., on the ground that while it was held to be a jewel it was an unset one and, therefore, only liable to a 10 per cent. duty. The local custom house officials took up the case and brought suit, which resulted in the decision from Judge Thompson, imposing full duty on all agate, whether set or unset.

The Fall Festival

Elaborate arrangements are now under way to make the fall festival, which is to be given in Cincinnati during the month of September, one of the most complete and novel in the history of the event. Particular attention is being paid to the electrical and government exhibits, and during the progress of the festival wireless telegraph and other late inventions will be demonstrated. The event will last four weeks, or double the time usually given to it, and the various traveling men's associations have agreed to take it up and boost for the city when making the territory which they cover.

Jewelry Trunk Misaid

During the last days of February the wholesale firm of Jos. Noterman & Co., of Race Street, was given something of a shock by a message from one of their road salesmen, announcing in effect that his sample trunk had gone wrong in Indiana and could not, at that time, be located. The trunk was in charge of William Pflueger, who was making the State of Indiana, and its contents were worth several thousand dollars. After having visited towns in the southern part of the State, Mr. Pflueger reached Vincennes, where he got what he supposed was

his trunk; but when he opened it to show his samples to a customer, he found that a wrong chest had been delivered to him. A message was at once sent to Terre Haute, where the error had been made in checking, and in a short time Mr. Pflueger was on the way to that place. Tracers were started out by wire and in a few hours the trunk was located and returned to Terre Haute, where it was turned over to Mr. Pflueger. It then developed that an error had been made at that point by agents of the railroad company in handling the trunk, and the confusion which usually precedes a train departure assisted in preventing the mistake being discovered for hours.

Watchmaker W. Rette, who has been connected with the repair force of E. & J. Swigart for some time, recently left for Cleveland, to assume a position with Ball, the Superior Street jeweler. Mr. Rette was formerly from Cleveland and did not think much of the Cincinnati climate.

J. A. Simpson, after having been in the retail jewelry business at New Richmond, Ohio, something like a year, has moved from there to Ripley, Ohio.

Mr. and Mrs. Frank Herschede reached home the latter part of March from a trip, covering more than a month, through the West Indies and other semi-tropic islands off the coast.

W. C. Ward has sold out his retail business at Winchester, Ky., and has gone into partnership with J. H. Smith, at Greenfield, Ind., where a large retail business will be conducted.

Martin Reinberg, aged fifteen, who was employed by the retail house of Charles Koplein & Co., on Race Street, was arrested a short time ago on a charge of theft, and on conviction was sentenced to six years in the boys' State reformatory. The boy had been suspected of the theft of a number of rings, watches and jewelry of a varied character, which the firm had been missing from time to time, and fell into a trap when placed under espionage. His story was that he had been taking the jewelry to bedeck a girl friend.

A. Herman, of Herman & Loeb, left here March 20th and sailed from New York March 23d, aboard the *Kaiser Wilhelm*, for Europe. He will be absent some months and will spend part of his visit at the springs at Carlsbad.

A number of members of the trade have been ill from typhoid fever during the past month. Peter Henry, the watch case maker, was reported critically ill late in the month. Arno Dorst, of the Dorst Company, was also taken down with the same illness during the month and was considered in a dangerous condition.

Fred. Krueger, who was in charge of the branch plant of the Dorst Company, which was being operated at Kansas City, has been recalled and is now again connected with the Cincinnati office. The Kansas City plant has been shut down, owing to illness of Mr. Dorst, Jr.

H. A. Horman, formerly of Germantown, Ohio, has opened a shop at Fifth and Vine Streets with W. H. Wilkening, where general repair work is to be done.

The will of the late Charles Duhme, who died some weeks ago, has been filed for probate. It leaves his entire estate to his widow.

A. Rothschild, of Brunswick, Ga., was among the jobbers during the month, putting in a supply of spring wares.

Mr. and Mrs. Gustave Fox, of the Gustave Fox Company, celebrated their silver wedding anniversary early in March, at their palatial home on Walnut Hill, in the presence of many friends and

relatives. The home was beautifully decorated with ferns and evergreen shrubbery, and light refreshments and music aided in making the celebration a memorable one. Mr. Fox presented to his better half a diamond-studded chain and pendant. The traveling representatives of the company presented the couple with a silver soup tureen, while the office employees gave them a beautiful silver loving cup.

D. Gutmann, of the firm of L. Gutmann & Sons, is home from an extended trip abroad, which included a voyage on the Indian Ocean. The party was on the voyage several weeks and from descriptions given a very enjoyable cruise was experienced.

Frank Glab, who has been conducting a retail store at Shelbyville, Ind., announces that he will quit the business in a short time, owing to ill health. The business will be disposed of at auction sale.

Alvin Lindenberg, formerly with Lindenberg, Strauss & Co., has gone to Indianapolis, where he has accepted a position as salesman with a jobbing house of that city.

A quantity of the jewelry of the late Archbishop William Henry Elder has been made into a chalice, which has been consecrated by Archbishop Henry Moeller. The chalice now adorns the altar at the chapel of the Seton Hospital, where Archbishop Moeller says mass daily.

A number of local jewelers went to Winchester, Ky., March 20th, to attend a meeting of Knights of Pythias, which was held there under the auspices of the State organization of that society for Kentucky.

W. A. Gahlenbeck, of Pensacola, Fla., was among the wholesale houses a short time ago, buying a heavy line of spring goods. He reports business in his section to be very good, considering the season of the year.

The following were among the visitors to the wholesale trade during the past month: C. F. Gray, Dayton, Ohio; A. Ochs, Kenton, Ohio; Henry Reisinger, Lawrenceburg, Ind.; G. H. Hansgen, Bethel, Ohio; S. N. Fisher, Beckley, W. Va.; John Hesselbrock, Liberty, Ind.; J. Joseph, Greensburg, Ind.; O. Sherwood, Falmouth, Ky.; A. Rothschild, Brunswick, Ga.; F. G. Wittlinger, Middletown, Ohio; A. J. Clark, La Follette, Tenn.; Charles Sederberg, Milford, Ohio; William Barth, of Beer & Barth, North Vernon, Ind.; J. Miller, Clinton, Tenn.; J. H. Drake, Lebanon, Ohio; W. H. Douglass, South Bend, Ind.; Charles Keller, Frankfort, Ky.; A. P. Humphreys, Bellefontaine, Ohio; M. A. Selbert, Frankfort, Ky.; F. A. Clough, Mt. Vernon, Ohio; F. A. Schweeting, Oxford, Ohio; Thomas C. Lucas, Hamersville, Ohio; William Leive & Sons, Aurora, Ind.; Otto and Charles Zoellner, Portsmouth, Ohio; C. H. Boone, Marietta, Ohio; H. A. Bedell, Jackson, Ohio; W. A. Gahlenbeck, Pensacola, Fla.; E. M. Young, Bedford, Ind.; Moses Kohn, Yittstown, Ohio; Joseph Wellstein, Milwaukee, Wis.; P. D. Freeman, Ashland, Ky.; A. Lyon, Lexington, Ky.; Samuel Trager, Terre Haute, Ind.; Bascomb Sturgill, Ashland, Ky.; R. W. Clark, Lawrenceburg, Ind.; Edward Israel, Harrison, Ohio; J. D. Ward, Rising Sun, Ind.; Charles Miller, Bellefontaine, Ohio; Albert Bland, Greenfield, Ohio.

"The Keystone is all right without any improvements and is worth more than the subscription price. I think the Workshop Notes a little the best; but, thinking it over, it is all 'best.'"—O. C. Hinchliffe, Jeweler, Rockville Center, New York.

DIAMONDS LOOSE AND MOUNTED

MAKERS OF FINE JEWELRY

JOS. NOTERMAN & CO.

512-514 RACE STREET

CINCINNATI, OHIO

DIAMONDS RECUT AND REPAIRED

THE BEST OPPORTUNITY FOR YOU TO LEARN A PROFITABLE TRADE

The W. L. Newmeyer School of Engraving

Cleveland, Ohio

A practical experience of nearly thirty years with the largest and best-known houses of the country—East, West and South—as well as in training engravers in specialties, has given us the necessary requirements to put you in the way of greatest achievement in the shortest time. Whether you are a beginner, or an engraver of experience who desires coaching in any particular specialty, we are qualified to bring you to the highest perfection of the art.

We guarantee by our original and practical method to give a complete course of instruction, thus fitting any intelligent and industrious person for business requirements. Write for an artistic brochure and interesting prospectus.

Monograms designed in an artistic manner in pencil, India ink or color, 50c to \$5.00.

Coats-of-arms, Crests, Heraldic Devices, etc., properly emblazoned, \$5.00 to \$50.00 according to size, style and detail. Also designing of letter heads, book plates, trade-marks, book covers, etc. Correspondence invited.

The W. L. Newmeyer School of Engraving, W. L. Newmeyer, Master

Garfield Building, Euclid Avenue and Sixth Street, N. E., Cleveland, Ohio

Completed Bearing Arch Crown Mountings

PERFECT STONE SETTING INSURED



The first and only mounting sold in a fully completed condition and ready to receive the stone without further alteration. Expand or contract setting to fit stone and simply press down the tips. The work will be perfect and the stone securely set and it can be done in five minutes.

The Arch Crown mounting is artistic in design and possesses great strength. It has no sharp points over the stone. It enlarges the diamond's appearance and gives it more brilliancy, because more light is admitted by the open arch construction. It is made in all usual styles, in 14 and 18 K. gold as well as platinum, both lined and tipped.

Samples cheerfully sent for examination at our expense.

ARCH CROWN MFG. CO.

24 Camp St., NEWARK, N. J.

Selling Agents { Schrader-Wittstein Co., Chicago
Eisenstadt Mfg. Co., St. Louis
M. Schussler & Co., San Francisco
Leonard Krower, New Orleans

LEADERS OF THE NORTHWEST

Kirchner and Renich

MAKERS & REPAIRERS of JEWELRY

**WE RETURN ALL REPAIR WORK
SAME DAY AS RECEIVED.**

**SEND IN YOUR NEXT PACKAGE
AND OPEN AN ACCOUNT WITH US.**

**10-50 Seventh St.
MINNEAPOLIS,
MINN.**



The beautiful spring weather which prevailed at our last writing was premature, as March has shown itself quite a blusterer and has been colder than normal. The result has been a temporary retirement of spring and spring business. April is certain to bring milder weather, however, and sunshine and Easter should enliven trade. Travelers throughout this section all report trade in good condition, but are waiting for warmer weather to stimulate more liberal ordering. The meetings of the optical associations and also the retail jewelers' associations in Minnesota and North Dakota, brought the trade together, and, being in the dull season, the interchange of ideas proved very valuable. The proposition to hold a joint Northwestern meeting during the summer was spoken of favorably and may be brought about if a little encouragement is shown. It would be a good thing for all to get together and discuss the situation. The association secretaries would be pleased to hear from those interested.

C. A. Swanson, Superior, Wis., was called to his old home in Redwing, Minn., by the death of his father recently.

J. L. Moody & Co., Ellsworth, Wis., have been succeeded by the Moody, Baker, Elliott Co.

G. O. Kalerud is the new jeweler at Perley, Minn.

Ralph Seigrist, formerly material order clerk with Sischo & Beard, has accepted a road position with Albert L. Haman, St. Paul. He will look after the near-by territory and the Twin Cities.

A. L. Bloomquist has begun business at Lan-kin, N. Dak.

J. J. Skaug, Minot, N. Dak., will move to his new store on April 1st. It has been fitted up with entire new fixtures.

D. D. Albrecht has succeeded Albrecht Bros., Hutchinson, Minn.

Roy D. Correll, secretary of the E. A. Brown Co., St. Paul, died March 5th at his former home, Vinton, Iowa. Roy was very popular and his many friends in the trade will miss his cheery smile. Out of respect to the memory of their co-laborer, the store at St. Paul was closed the day of the funeral.

M. L. Crane, Fairchild, Wis., spent several days at Milwaukee, where Mrs. Crane is in the hospital.

J. P. Landbeck, Stephen, Minn., was elected justice of the peace at the recent election. John certainly will make good when it comes to dispensing justice.

K. D. Olson, Harmony, Minn., was elected member of the village board of trustees.

The Rugby Jewelry Co. succeeded R. Higgins & Co., at Rugby, N. Dak.

Schute & Ketcham, Madison, S. Dak., suffered quite a fire loss March 7th.

John Fredell, Center City, Minn., was elected a member of the village board of trustees at the March election.

H. H. Starr, New Richmond, Wis., paid a short visit to his old home at Elroy, Wis., last month.

N. C. Unseth, Grantsburg, Wis., had his store destroyed by fire last month and is now working for C. D. Lonergan.

John Johnson, Superior, Wis., has enlarged his store.

M. N. Bergh, Duluth, Minn., made an extended trip to the lumber camps last month.

F. R. Elliott, Ellsworth, Wis., was unable to attend to his usual duties last month owing to serious ear trouble.

We are pleased to note that Theo. G. Mahler, LeSueur, Minn., is recovering from a six-weeks' illness.

J. A. Beard, of Sischo & Beard, St. Paul, has returned from his Northern trip. Judson says the snow is deeper than at any time in his road experience.

J. M. Chalmers, Lake City, Minn., has added an entire new outfit of fixtures to his store and now has, without question, the ideal store in the State. He is proud of it and with good reason.

Edw. Moore has accepted a position with Sischo & Beard, St. Paul, and will cover the Southern territory. Edward should make good as he has the happy faculty of making friends easily and by square treatment holding them.

C. F. Sischo, president of Sischo & Beard, is enjoying a month's vacation with his family in Southern California, where they are visiting their daughter.

The Paegel Jewelry Co., Minneapolis, have entirely remodeled and improved their store-room.

Fred. Willman, Stillwater, Minn., has been selling his stock at auction. He will retire from business.

O. H. Arosin, St. Paul, Minn., has repapered his storeroom and otherwise embellished it.

J. A. Minder, has succeeded Benson & Anderson, Crystal, N. Dak.

A. O. Carlson has opened a store at Lansford, N. Dak.

F. W. Kinoin, lately with O. H. Arosin, St. Paul, has bought out Oscar Anderson, Velva, N. Dak.

August Früs, Milltown, Wis., has closed his shop there and gone to work for O. C. Hustad, Tower City, N. Dak.

C. H. Nesbitt, Harvey, N. Dak., has returned from Chicago, where he went to take treatment for his ear trouble.

Swan Anderson, Willmar, paid a visit to the Twin Cities, where he was attending to his duties as member of the board of education.

Ed. Peterson, of Erickson & Peterson, Gladstone, Mich., passed through the Twin Cities on his return from a trip to the Western Coast.

Albert Benson, for the past four years with Louis Hausen, Devil's Lake, is now with the Rugby Jewelry Co., Rugby, N. Dak.

Oscar Holm has started in business at Cambridge, Minn.

Randall & Boylan have succeeded J. L. Warbasse, Dennison, Iowa.

N. C. Anderson, Fargo, N. Dak., will move to his new store April 1st.

J. Gruesen, Duluth, Minn., has added an entire line of new fixtures.

Ray Pettie, formerly with F. D. Day & Co., Duluth, is now with Wennerlund & Nelson.

D. B. Bryan, of Albert L. Haman, St. Paul, has returned from his Coast trip and reports everything booming.

The opticians' and jewelers' meetings brought a great number of visitors to Twin City jobbers and many old acquaintances were renewed during their sojourn in the city, to the pleasure and advantage of all concerned.

Notes from Alabama

Prosperity in the South

It is a difficult matter to realize how rapidly the South, and especially Alabama and a number of States lying neighbor to her, are growing. Even men who are interested in keeping up with such things have not been able to understand how the prosperity in this section is expanding. A glance at the figures produces astonishment. From the resources of the South last year the returns were \$6,000,000,000, divided as follows: Agricultural, \$1,500,000,000; commercial, \$2,000,000,000, manufacturing, \$1,500,000,000; other sources, \$1,000,000,000. This is almost 6 per cent. of the wealth of the entire nation, showing that we are in possession of \$30,000,000,000 of value, and that our earnings last year were 20 per cent. Our improved acreage last year produced \$1,500,000,000, which is 50 per cent. on the entire acreage, 66 per cent. of which is not improved.

Coming to Alabama there is a remarkable story in the results attained by the State government. For the five years dating back from 1906, the value of property in the State increased from \$266,893,288 to \$344,224,221. On the first day of January, 1896, the balance in the treasury was \$58,319. It had grown in 1900 to \$629,691, and in 1906 to \$1,421,921. To-day it is fully one and a half millions. Several years ago the State began hiring convicts by the piece. In five years they earned net for the State \$937,278, as against \$104,869 the previous five years, a gain for the period of \$832,409. The insurance department earned net in the last five years \$387,004, the previous period \$22,875. During the five years ended last December the State paid for schools the sum of \$5,424,826, previous five years, \$3,436,162. During the same latter period it paid to soldiers and their widows \$1,600,776, as against \$597,702 the previous five years. Last year the returns of the convicts above all expenses were \$293,291, this year it will go beyond \$300,000.

The State has just refunded \$7,347,600 of bonds coming due in July at a basis of 3.82 for four per cent. fifty year securities. The entire amount was taken, save \$346,000, which went to small bidders, by a syndicate composed of Ladenburg, Thalmann & Co., of New York and Alabama, bankers. This is regarded as a fine trade in the present condition of the money market, though the Governor had an offer for a bond at about a basis of 3.43 a year ago. He sold \$966,000 maturing last January for a basis of 3.43. The entire expenses of the State last year, including interest on bonded debt, was \$3,130,032, or about \$1.50 per capita. The amounts indicated below were a part of this sum: Old soldiers, \$472,365; schools, \$1,123,781; quarantine protection, \$12,202. The coke production in the State for last year was 2,756,698 tons, as compared to 2,284,095 the previous year.

The Trade Prosperous

The jewelers of the State are sharing the prosperity of the times. They agree that there has never been so good trade and so close collections as now. Birmingham and Montgomery have felt this along with Mobile, where the prosperity has been wonderful. Port business there has grown so that the citizens of the city cannot realize it. In Montgomery the better things are seen in the enlargement of the stores. President LeBron, of the LeBron Jewelry Co., says that his house will be forced to acquire more

(Continued on page 607)



HOLD YOUR TRADE

by handling Bassett Chains—quick sellers,
big profit makers and satisfaction
guaranteed. Select styles for
fastidious purchasers—
popular styles for all

**TIE TO
BASSETT CHAINS**
and Avoid Dead Stock
and dissatisfaction

THE BASSETT JEWELRY CO.

Factory
Manufacturers' Building, PROVIDENCE, R. I.

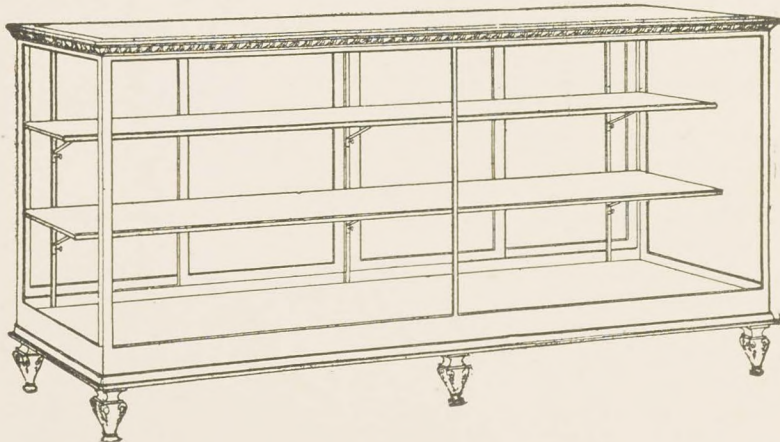
NEW YORK OFFICE
37 Maiden Lane

CHICAGO OFFICE
Masonic Temple Vaults

MINNEAPOLIS OFFICE
617 Lumber Exchange

SAN FRANCISCO OFFICE
120 Sutter Street

WEEKS. ADV.
PHILA.



The Phenomenal Sale of this Case Proves its Usefulness

Jewelers with a keen eye in every case relating to their business, saw at once the beauty, utility and cheapness of our **"IDEAL" CASE.**

It is made of solid oak, or other wood desired, highly polished, beveled plate-glass top, double strength glass front, ends and doors, has two highly polished shelves of same wood as case, supported by Tom's adjustable brackets, metal legs six inches high, and doors run on steel tracks.

DIMENSIONS:—Length as ordered, 28 inches wide, 43 inches high, upper shelf 12 inches wide, lower shelf 16 inches.

The construction of this case is first-class. It has a nicely molded top, ornamented with egg and dart.

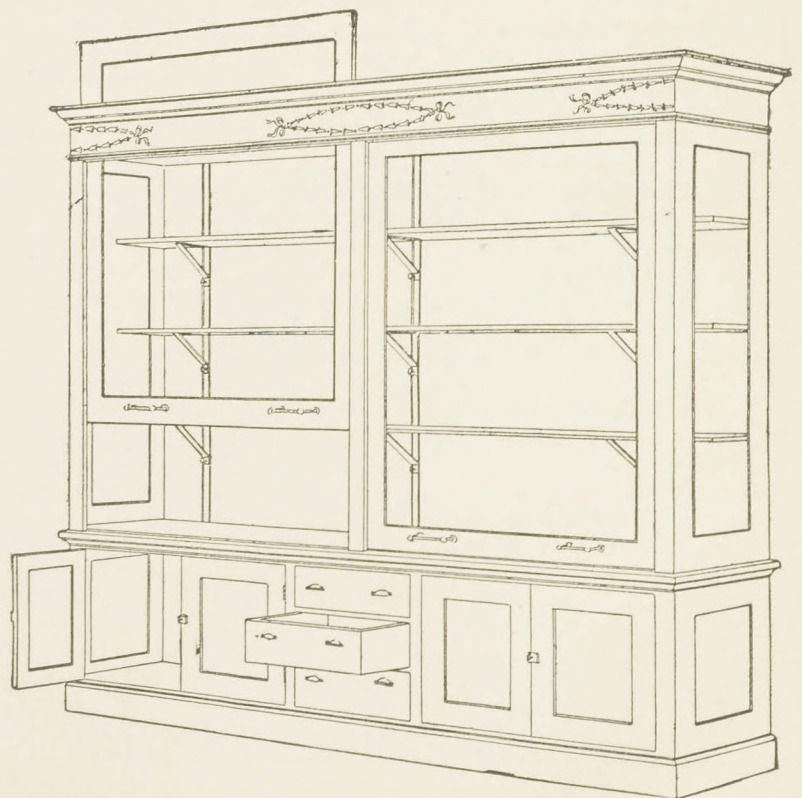
A BEAUTIFUL CASE

Made and sold by

Union Show Case Co.

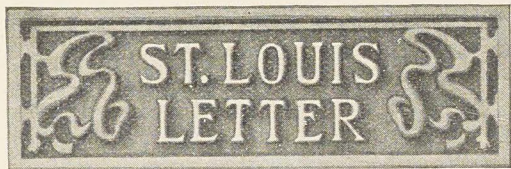
105 E. Lake Street, CHICAGO, ILL.

FACTORY—56-66 Frank St. and 424-428 Maxwell St.



Wall Cases. Solid Oak. 8 feet long, 8 feet 4 inches high, 1 foot 4 inches deep inside. Doors slide up, fastened to Morton's steel chains and weights. Inside of case and shelves lined with black felt. Made to ship in the knock down.

Net price, **\$58.00.** Worth \$70.00



Business Conditions and Prospects

Our wholesale houses report that the aggregate of their sales for the month of March will exceed that of the same month last year, but our retailers report that business is quiet with them, and hardly up to March of last year. The prevailing wintry conditions the past month likely have something to do with this condition of things among our retailers. But business among our jobbers continues brisk for the spring season, and they consider the outlook for continued prosperity in St. Louis and the territory she draws her trade from as very encouraging. The snowfall was general all over this territory during March, and was of incalculable benefit to the wheat crop. Now that spring weather is more settled and Easter approaching, it is expected that trade will pick up among the retailers in the country districts.

"Missouri will Show Everybody"

To advertise properly the attractions of rural and undeveloped Missouri is the object of the Missouri Immigration Association, which held its first meeting in St. Louis on the first three days of March. From all over Missouri prominent men came to attend the meeting. The sentiment of the "boomers" was that there are too many clean places on the map of Missouri, and the object is to properly present the attractions of the State's agricultural and mineral possibilities so that prospective home-seekers will settle here instead of going farther and doing worse. The many claims that Missouri has to being a great State were discussed, and a systematic campaign for increasing immigration was enthusiastically begun.

The address of welcome was given at the opening meeting by F. W. Crandall, president of the Interstate's Merchant's Association. "Our object," said Mr. Crandall, "is to attract desirable immigrants to Missouri, and thus populate her five or six million vacant acres of the best farming land in the United States. This is the best way to solve the problem of the unemployed in the great cities."

One of the many interesting addresses made during the three-days' session, was that of Norman J. Colman, former lieutenant-governor of Missouri, first secretary of agriculture, and the present editor of *Colman's Rural World*, of St. Louis. Mr. Colman spoke ably on the subject "Why Come to Missouri." He recounted at length, "the vast agricultural resources of the State, its possibilities in stock raising and fruit growing, and closed his address by a comparison of Missouri to-day with Missouri fifty years ago." Mr. Cannon addressed the convention on the objects of the association, and advised them to aid it by putting their money and time into work, and by seeing that each congressional representative is made to know that they want the present irrigation law enforced.

Mr. Atwood's paper on "Fruit Growing in Missouri" showed the possibilities of growing fruit in the State, and described the great increase of that industry in Southwestern Missouri in the last few years. "Missouri will show everybody," was the motto adopted by the convention. Permanent organization was formed during

the meeting, officers were elected, a constitution and by-laws adopted, annual meetings decided on, and plans for the vigorous pushing of the work outlined were formulated. One of the resolutions adopted was the following: "Thousands of home-seekers and investors from the older States and from Europe, are passing through Missouri to locate in the far southwestern States. In this way Missouri is being neglected. We, as patriotic citizens of the imperial State of Missouri, believe that our State offers greater opportunities to the homeseeker and investor than any other State in the Union." Let the good work go on.

Missouri's Manufacturing Industries

Missouri's manufacturing industries make a very interesting and satisfactory exhibit in the report of State Labor Commissioner Anderson for the year ending in November, 1905. The total value of all goods manufactured in the commonwealth during that period was \$384,344,052, or \$36,269,802 more than the output of the preceding year. This large total involved an expenditure in wages of \$65,724,234 to 104,106 men, 25,059 women and 5552 children, or a total of 134,718 persons. The increase in the wages account over the preceding year was \$7,300,684. It further appears from the commissioner's statistics that the manufacturing enterprises of the State had invested in grounds \$26,600,756; in buildings, \$34,972,785, and in machinery, \$39,678,519. The total capital invested was \$185,515,244, as against \$145,005,620 the previous year. The largest manufacturing industry in Missouri is represented by the packing houses, whose combined output in 1905 was valued at \$59,917,970, a material increase over that of the year before. The flour mills were next in the order of importance, boots and shoes third, and malt liquors fourth.

Indian Territory now a State

The farmers from Missouri, Illinois, Iowa, Texas and Kansas, who have gone and are still going into the new State of Oklahoma to buy land from the Indians, are not, as a rule, giving any mortgages. Having sold higher-priced lands in the States where they came from, they pay cash for acres they buy and have money in bank with which to begin work. And having as good land as there is in America, success and prosperity follow on their good start. No territory has ever come into the Union in better shape than that in which the Indian territory to-day finds itself.

Charles G. Derleth, the well-known jeweler of East St. Louis, who met with a serious accident the latter part of February by being struck by a terminal switch engine at the relay station in East St. Louis, though seriously injured, is, we are glad to state, now recovering. Mr. Derleth had a narrow escape from death, the bumper of the locomotive striking him in the back, and hurling him several feet to the side of the track. His injuries are internal, on the left side and back, and have been very painful, but Mr. Derleth is now on the mend, and hopes to be at business again before the present month is over.

A. J. Lee, with the Aller-Newman-Wilmes Company, has recently returned from a two-weeks' vacation spent in Chicago, his old home.

Wm. Gotsch has just opened up a new jewelry store at 4196 New Manchester Avenue, this city.

Vincent Rapp, Jr., retail, at 1718 South Broadway, this city, will have the sympathy of the trade in the great loss he has sustained in the death of a little daughter, whose death occurred last month.

Fred. Simonds, of Collinsville, Ill., was a visiting buyer in this market last month.

Joseph Knapp, of Knapp Brothers, of Belleville, Ill., was a trade visitor in this market last month.

John Koetting, of St. Genevieve, Mo., spent a day in town recently on a buying trip.

Albert L. Haman, of St. Paul, Minn., the well-known railroad time inspector, was in St. Louis recently and paid his respects to the wholesale trade.

I. D. Morris, of Perry, Mo., was a welcome buyer in this market recently.

E. Dick has just embarked in the retail jewelry business at New Baden, Ill. Mr. Dick selected his opening stock in the St. Louis market.

A. F. Niemeyer has purchased the retail jewelry business formerly conducted by R. F. Reeves at 1621 Market Street, this city, and will continue it at the old stand. Mr. Niemeyer was formerly in the retail business at 1125 North Vandeventer Avenue. He has sold this store to J. A. Welsch.

Ed. Massa, of the Bauman-Massa Company, and Mrs. Massa, have just returned from a delightful three-weeks' outing spent on a sight-seeing trip to Cuba.

Fred. L. Steiner, secretary of the St. Louis Clock and Silverware Company, is the proud father of a new son and heir whose recent arrival has brought joy to his family circle.

T. H. Vinyard has just opened up a new store at Bismarck, Mo. Mr. Vinyard purchased his opening stock in this market.

Tower & Long is a new wholesale watch material, tool and jewelers' supply house recently established in this city with an office on the fourth floor of the Holland Building. The firm also carry a line of jewelry. W. E. Tower, the head of the firm, has for several years past carried on this business at Springfield, Mo., and A. W. Long was his traveler.

J. A. Welsch, formerly with J. F. Ingalls, has bought out the retail store of A. F. Niemeyer, at 1125 North Vandeventer Avenue, and will continue the business at the old stand.

Henry Schubach is a new man with the E. Maritz Jewelry Manufacturing Company, who will look after their road interests.

W. P. Armstrong, of Carruthersville, Mo., was among the many trade visitors in this market last month.

F. A. Woolford, of Chester, Ill., was a visiting buyer in the St. Louis market on the lookout for late spring novelties.

W. G. Myerley, of Rich Hill, Mo., spent a few days in the St. Louis market recently selecting his spring bills.

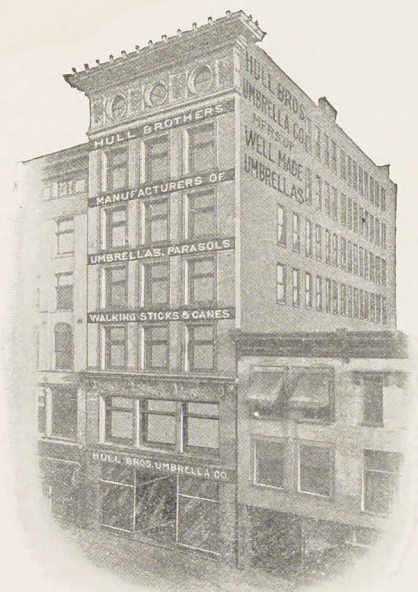
W. A. Grant, of Harrisburg, Ill., was a recent visiting buyer in this market.

W. H. Stalberg, of Hoyleton, Ill., was here for a day recently on a spring buying trip.

The Production of Aluminum

The production of aluminum in the United States has increased nearly ten-fold in as many years, according to the annual report of the United States geological survey for 1904, which has just been completed. The output of 1904 was 8,600,000 pounds, as compared with 7,500,000 pounds in 1903, and 7,300,000 pounds in 1902. When it is remembered that the industry dates its beginning from 1883, in which year the production was eighty-three pounds, its rapid development will be appreciated.

SPECIAL ANNOUNCEMENT



Factory and Main Office at Toledo, Ohio

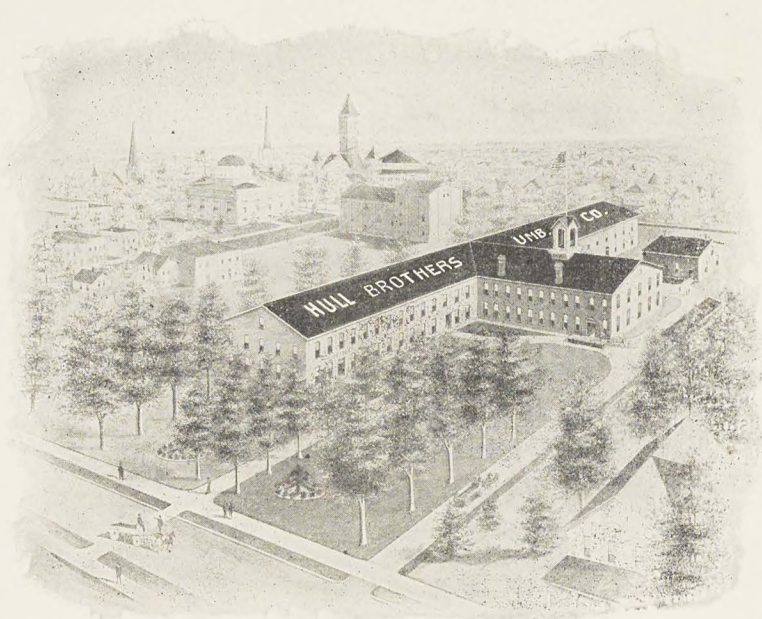
We are pleased to announce the opening of our new factory at 344 346 Summit St., Toledo, Ohio.

Our large and rapidly increasing trade made it necessary for us to establish another factory, and after thoroughly considering several cities decided on Toledo, as it is one of the largest railroad centers in the United States.

Our new factory is one of the most modern plants in America for the manufacture of umbrellas.

Our private electric plant

will furnish power and light for the eight spacious floors devoted to the making of the celebrated **HULL DETACHABLE HANDLE UMBRELLAS.** All shipments will be made from our Toledo plant, and all communications and remittances should be addressed to



Factory at Norwalk, Ohio

Hull Brothers

344-346 Summit Street



TRADE-MARK

Umbrella Company

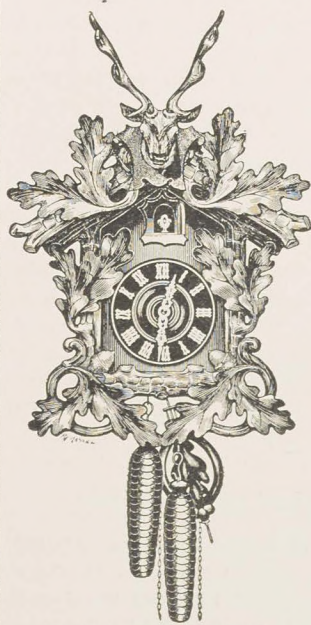
TOLEDO, OHIO

Why are we Doing the Largest

CUCKOO CLOCK BUSINESS

in the world?

Can't be a Matter of Luck—Things Don't "Just Happen"



No. 522. 21 inches high

It is this: We have given dealers better Cuckoo Clocks to sell than have ever been made; clocks that they're proud to sell, and can safely recommend because we guarantee them. There's some satisfaction in selling such Cuckoo Clocks—they make trade and keep it. Better send for our new catalogue and other literature.

AMERICAN CUCKOO-CLOCK COMPANY
Cuckoo Clocks and other Unusual Clocks
STATION S. PHILADELPHIA



WHY is our business ever on the increase

BECAUSE our everlasting square deal to all

is continually

WINNING NEW CUSTOMERS
and bringing us into closer touch with the old ones

IRONS & RUSSELL, Emblem Makers

New York Office
11 MAIDEN LANE

Main Office and Factory
95 Chestnut St., PROVIDENCE, R. I.

The Finest Graver in the World

We have worked years for it; our expert (a former razor manufacturer) at last has satisfied us and **we have it.**

The "REES SPECIAL" Square Graver

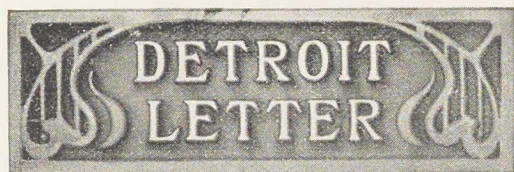
Made entirely by hand. Finest hand-forged German steel. The finest grain. The finest cutting edge. A wonderful tool. Worth a dozen ordinary gravers. One expert engraver says they are worth \$5.00 each. Every one warranted.

By mail, **60 cents each**, mounted, ground, polished ready to use.

REES ENGRAVING SCHOOL

Steele Memorial Building

ELMIRA, N. Y.



After an illness lasting only three days Frederick Rolshoven, a pioneer jeweler and prominent German, of Detroit, passed away, February 23d, at his late family residence, 312 Congress Street, East. Mr. Rolshoven was seventy-seven years old and senior member of the firm of F. Rolshoven & Co., 166 Woodward Avenue. He had been failing in health for several months, but continued to come to the store till the Saturday before his death. A slight attack of tonsillitis quickly developed into pneumonia, resulting fatally.

On April 26, 1905, the firm of F. Rolshoven & Co. celebrated the golden anniversary of its establishment in business here. This celebration extended over four days, and the elder Mr. Rolshoven seemed to take great pleasure in greeting old friends who came to congratulate the members of the firm upon their business success. On November 26, 1905, Mr. and Mrs. Rolshoven celebrated their golden wedding anniversary. Mr. Rolshoven's specialty was the setting of precious stones. He learned his trade in Cologne and started to work for a jeweler at an early age. He gained a widespread reputation in his native country before deciding to cast his lot in America. He came almost direct to Detroit and started to work for Mr. Allison, going into business for himself in 1855 in the Russell House Block, now torn down. As the business center of the city changed, Mr. Rolshoven shifted also, having a store in the Moran Building, then at 19 Jefferson Avenue, and later at 70 Woodward Avenue. About twenty years ago he moved to the present location, 166 Woodward Avenue. Business cares did not weigh on his mind very heavily during the last years of his life, although he visited the store nearly every day. With Mrs. Rolshoven he enjoyed a well-earned rest while watching his grown-up children prosper in business and art. Besides his widow, the following children survive the deceased: Herman A. Rolshoven, associated with his father in the jewelry business; Julius Rolshoven, a well-known portrait artist; Mrs. Dr. N. Lehman, St. Paul; Mrs. Olive Denett Grover, Chicago, and Mrs. Edwin C. Bolton, Detroit, Mich.

Robert Siegel, brother of Joseph Siegel, 12 Canal Street, Grand Rapids, Mich., has gone into the jewelry business on his own account at 43 Lyon Street, in the same place.

Roy Houghton recently sued Jeweler John Hellerich, 39 Michigan Avenue, for \$500 personal damage, claiming Hellerich crowded him off the road while driving. No cause for action was the verdict.

S. H. Bonfield, jeweler, at 77 Wood Avenue, met with a peculiar accident, recently, when he went into the store. During the night the front show window, which is enclosed, became filled with gas from a leaky pipe. When Mr. Bonfield opened the case he had a cigar in his mouth. There was a terrific explosion. Bonfield was hurled back several feet and was quite severely burned and cut about the face by glass. Wm. Malloy, who was looking in the show window from the sidewalk, was blown into the street. He was also cut and burned, but not fatally. The damage to window and stock was about \$500.

Detectives Brooks and Fox recently arrested Geo. C. Mortimer and Geo. W. Paradis, of Wood-

stock, Ont., charged with stealing two diamond rings from the jewelry store of Howell Bros., Windsor, Ont. They substituted "phony" rings for the genuine. They had a diamond ring in their possession and several rings set with spurious stones. They admitted the ring had been stolen from Jeweler James H. Garlick, 131 Griswold Street. Garlick did not know about his loss until the police telegraphed to him. The prisoners had \$100 in cash, and this was used to redeem the two rings stolen from Howell Bros. which had been left at two Detroit pawnshops.

W. F. King, Jr., of Adrian, Mich., was in Detroit three or four times last month picking up new goods for his stock.

W. W. Bridges, of Marine City, made a flying trip to Detroit recently to purchase goods for his store.

A. Smith, an old resident of Three Rivers, Mich., who formerly conducted a retail jewelry business there, and later moved to Admire, Kans., has again started in business at Three Rivers.

Frank Dyer, of Caro, Mich., visited Detroit recently.

Burt. T. Wayhing, of the firm of Wayhing Bros & Co., manufacturing jewelers, was recently married to Miss Cora Hardy.

Geo. E. Childs, of Flint, Mich., was recently operated on for cancer at the Grace Hospital in Detroit.

Geo. Monsiotti was recently arrested in Detroit on a charge of attempted larceny, preferred against him by Charles W. Warren & Co.

Robert Vanstone, who sold his jewelry business at 328 Grand River Avenue to Davison & Humbeck, has gone to California for his health.

E. A. Cress and wife, of Minden City, stopped at Detroit on their way to Washington. From there they go to Kansas, to be absent several weeks.

The jewelry store of M. S. Elzey, Detroit, Mich., was recently broken into by thieves, who escaped with three watches and a small amount of jewelry.

Chas. P. Eisenmann, formerly manager for Henry C. Richardson, Spencerville, Ohio, has bought out the old-established jewelry business of Geo. H. Thoma, Three Rivers, Mich. Mr. Thomns who does not enjoy the best of health, is spending the winter in California.

R. S. Allison, St. Johns, Mich., has just completed extensive improvements in the interior of his store. New hard-wood floors have been added, and a partition has just been constructed across the rear end of the establishment, making a large show room on the one side and a room for unpacking cases on the other.

The Colonial Manufacturing Co. is the name of a new concern which was recently incorporated in Holland, Mich., with a capital stock of \$35,000, to manufacture hall clocks and novelties. The firm contemplates erecting a large brick factory.

A large cut-glass door panel recently attracted a lot of attention in Wright, Kay & Co.'s window. The panel was cut by the Simms Cut Glass Manufacturing Co., a new enterprise, and is said to be superior to any foreign cut work. It is cut by machinery invented by Joseph Simms, who came to Detroit from Bohemia, the home of cut glass, three years ago, and started his shop in a modest way at Twenty-first and Porter Streets. L. B. King & Co. and Wright, Kay & Co. became interested in his work, with the result that a company was formed and capitalized at \$30,000, with the intention of establishing a factory in Detroit for the manufacture of cut-glass door and window panels.

Notes from Alabama

(Continued from page 603)

space and facilities. He will see that show cases are put in this fall, though it does not now appear where they will be put. Mr. LeBron says that no one ever expected to have so much of a run, and few prepared for it when sizing up room needs a few years ago. C. L. Ruth & Son are also pressed for room, though they have a much larger store than LeBron. Weiss & Son have moved everything back that they can, and are utilizing the whole of the front in show stocks.

Though he is just established in his new place, M. E. Pepperman finds that he has insufficient room for his growing trade in the new Exchange Building. Mr. Pepperman is just back from New Orleans, where he spent some days looking over the trade, and finds that the farther south he goes the better things are. He says that New Orleans jobbers tell him that the year just ended has been by far the best they have ever known. The same is told by the traveling men. They are all ready to sing the praises of the South. Mr. Pepperman had a scare the other night that ended well. The annex to the building he occupies was burned. When it first caught there was fear that the whole structure was going. However, the fire doors were shut, and the smoke even kept from the other part of the building.

More Room Needed

The new home of F. W. Bromberg, one of the leading jewelers of Birmingham, will be unusually handsome. The Brown-Marx Building is to be in every way modern, and Bromberg will have one of the ground floors. As the building nears completion, he is figuring on his furniture as well as his stock. He will allow his stock to run as low as he can, so that he will go into his new home with new stuff as far as possible. He is getting ready to contract for fixtures, and very likely he will spend some days in the east before he decides what he wants. It is understood that he will use black walnut mostly, with copper and brass fixtures at the bases inside and out. He will have a special room for his optician, and fill the interior of the structure with the best furniture. Mr. Bromberg has been a wonderful success in Birmingham, going there four years ago from Mobile. He is a young man, and risked his savings in his business, which has more than justified his judgment.

When Henry Leuy died a few days ago in Montgomery there went to the great beyond a man who had been at the bench as a working jeweler for sixty-two years. He was seventy-six years old when he died, and had worked up to two months before death came. He came to Montgomery in 1852, and he and his brother, B. M. Leuy, at one time owned one of the largest business houses in the city. Though he went to the war of the sixties, he soon got back to his bench, and kept it up all the time. Mr. Leuy was more of a student than a business man, however, which no doubt accounts for the fact that he died poor, his last place being a little hole in the wall on Monroe Street, amidst the negro restaurants and Italian fruit stands. He was regarded as one of the best Hebrew scholars in the South and knew many languages. He learned his trade in Europe, and came here a young man.

C. L. Ruth & Son have installed a novelty window of brass and china, which is very attractive. This firm is also doing a lot of new sign painting.

Shirt waist sets and other spring novelties are selling well, and the winter seems to be over.

We take pleasure in announcing

OUR REMOVAL

TO NEW QUARTERS

Corner of Fifth Avenue and Smithfield Street
SECOND FLOOR, PARK BUILDING

GEO. B. BARRETT CO.
PITTSBURG, PA.

WHOLESALE DIAMONDS, WATCHES AND JEWELRY

Our new quarters mean a more desirable location,
enlarged facilities, increased stock and perfect service

WIGHTMAN & HOUGH LOCKET DESIGNS FOR SPRING

Design
Illustrated

No. 7865



Trade mark
stamped
in each
Locket



With the first thought of Spring **LOCKET** Trade, the progressive jobber turns his attention to our new designs. W. & H. stamped within a locket is an assurance of "everything that is right" in locket making.

3 Maiden Lane
New York

Wightman & Hough Co. Providence, R. I.

You Owe to Yourself

the greatest care in choosing a school for learning the trade on which you will depend during your lifetime.

Go to the school which is known as having methods of instruction of distinct and pre-eminent excellence, and which has *earned* a reputation for reliability in what it promises to do for those who enter as students.

Such a school is

**The Ezra F. Bowman
Technical School**

of Watchmaking, Engraving and
kindred branches

Write for Prospectus

LANCASTER, PA.

PITTSBURG LETTER

Many Removals The great bugaboo of householder and storekeeper alike, moving day, is at hand and is affecting the jewelry trade with more than ordinary force this year. It will more than likely be the last season for April movings, however, as Pittsburg landlords have united on an agreement to change the lease-year from May to May instead of from April to April, as has been the case for many years past. But this has not caused any lessening of troubles at this season. Old-time houses, landmarks in the busiest business sections of the city are shifting and moving about with astonishing activity.

Chief among the jewelry firms that have changed location is **New Quarters of Geo. B. Barrett Co.** the old-established wholesale house of Geo. B. Barrett Co. For twenty-four years this old firm held to its old location on the second floor of the old Chronicle-Telegraph Building in Fifth Avenue, remaining there withstanding steady advances in rent without return in improvements or increased space to correspond with the increase in their business. Finally the last straw was added to the burden when a wholesale advance to \$10,000 for a single floor, and that without any modern improvements was made. The firm then decided to move, and the change to their present quarters is an excellent one from every point of view. The new home is included in about one-half of the entire second floor of the Park Building, a skyscraper at Fifth Avenue and Smithfield Street, which occupies the busiest corner of the busiest two streets of the retail section of Pittsburg. This new home was secured by the throwing open of a half dozen large offices into one storeroom ninety-four feet long, with large windows for the full ninety-four feet. A broad stairway leads from the main entrance of the building to this floor in addition to the elevator service, thus making a decided contrast to the narrow and steep stairway of the old building and the uncertain single elevator that ran semi-occasionally. The new room has been handsomely decorated, and all of the fixtures for the firm have been given a natural wood finish. Handsome electric chandeliers stud the ceilings and the walls, and the entrance is artistic and attractive, leading from a broad hall near the elevator shaft, where six plunger elevators are at the service of the customers. To the rear of this fine large room is a corner room reserved for the private office of George B. Barrett, with abundant light, overlooking Smithfield Street. Adjoining Mr. Barrett's office is a storeroom and stock department with a series of carefully-arranged cases. Immediately across the main hall is a large corner office room that has been turned into a finely-equipped shop for repair work and a general mechanical department. Throughout the entire establishment is an abundance of daylight in the daytime and electric light in the evening. In the arrangement of the cases and counters, because of the shape of the handsome room, there will be more space for display than ever before. It is also intended to add materially to the stock carried by the house, and in many ways the new establishment will be one of the handsomest in Pittsburg. Prior to occupying the new rooms, a handsome and highly-polished hardwood floor was laid, which, with the delicately-tinted ceilings and walls and

highly-polished woodwork has added to the beauty and attractiveness of the new home of this company immensely. The moving into the new store began the latter portion of March. New safes have been secured, two of which were specially arranged for stock, and have plush-lined drawers from top to bottom, the safes themselves being of enormous dimensions. Three others will be brought from the old establishment. The Holmes electric protection service is added to the store, so that every window, door and safe in the place is electrically connected with police service.

Friends of the Geo. B. Barrett Co., of years' standing, have been profuse in their congratulations over their removal and securing the handsome new home. By a peculiar coincidence, the greater portion of the remaining half of the second floor of this great building is occupied by Gillespie Brothers, the extensive retailers. This house has increased its space considerably, and, with its new neighbor, controls what is probably one of the most valuable business spaces in any skyscraper in the retail district of Pittsburg.

Another Important Removal Another big jewelry house to change location is that of W. W. Wattles & Sons. This firm remained on Fifth Avenue for forty-seven years and all that time in one place. Its removal to its new quarters on Wood Street, therefore, is almost a semi-centennial celebration. The new building is not yet ready for interior finishing, as it is being thoroughly overhauled and modernized. The plans for the interior are, however, said to be on an elaborate scale and more room will be provided for carrying stock and in making attractive displays.

The plans for the rearranging of the new home for the E. P. Roberts house, in Fifth Avenue, will be taken up in a few weeks. The change will come June 1st. Mention of the removal of this house was made in the last issue of THE KEYSTONE.

Trade Conditions General trade conditions in Pittsburg remain in a healthful tone. Jewelers report that sales indicate a buying of higher grades of stock than usual. The calls are for perhaps less volume in stock but higher in price. This feature of the business has become more pronounced during the past few months than ever before. The reports from salesmen on the road are of similar tenor. It is not unusual now for the trade in smaller towns of the district to send in orders for costly brooches and diamonds, which a few years ago would not find a sale outside of the city proper. All this is taken to mean that the general condition of the people is prosperous, and cheap goods are being passed by more than ever.

Displays of Art Goods

As though corroborating this idea, it is noted that the majority of the retailers in Pittsburg are making a special display of some of the finest collections of imported bronzes and art goods that have been seen in the city. The handsome show windows of Terheyden, Vilsack and Wattles are filled with such effects, and so attractive are they that much admiring comment is heard of them. Novelties, it is true, are conspicuous at this season. Colors in leather goods are becoming faddish, and with the demand for such articles to match clothing for the fair sex, the market has developed in a manner that has brought a good share of attention this spring. Lenten season is in, and while social events have quieted down as usual, the form and rules of society are becoming more broad, and, as a rule, trade does not suffer much from the season. It is a notable fact that the

attendance at the theaters is fully as large as ever. Grand opera will reach Pittsburg during this season, and in spite of the more solemn attitude of the "butterfly" set at this time, the seats for this great musical week of the year are being eagerly taken.

Manager J. T. Montgomery, of M. A. Mead & Company's Pittsburg branch, has been having his troubles in getting settled in his new suburban home in Sewickley. Of the trade, he says that the results of the past month have been satisfactory and up to expectations for this season. There have been no former records to make comparisons with, but the coming seasons will have to show well, he says, to keep pace with the early spring months of 1906. Reports from Mr. Parker, the Eastern representative of this office, are of a most encouraging nature. Mr. Dunbar, who is covering the Pittsburg district, has just returned from his second trip of six weeks, and has a long list of orders as a result of his work. Some amusement was caused recently by the appearance in these offices of J. C. Ladds, a well-known Buffalo jeweler, who had started from Buffalo to go to Oil City, and fell asleep on the train and awoke in Pittsburg. He made the most of his unexpected visit by calling on the trade and telling of his amazement when he found where he had landed.

D. R. Young, of Youngstown, one of the prominent jewelers of that Ohio city, was in Pittsburg this month arranging for new store fixtures for a store that he will move into April 1st. Incidentally he has related his experience in a robbery there, in which the thief broke his large show window and stole some valuable gold chains and watches from a tray that was being displayed inside. A few hours later the thief was found in another portion of the city trying to sell them. All of the goods were recovered.

Heeren Brothers & Company are quite busy and report a steady trade of a most satisfactory character. The salesmen's reports from the road are encouraging and indicate that the jewelers of the Pittsburg district and trading territory are feeling the impetus of prosperous times. Attention is called to the uncertainty of the coal trade owing to the miners' dispute. At this writing, while it is not at all certain that there will be any general upheaval of the laboring forces and a suspension of operations, such an event will certainly cause a depression in business generally, and particularly in the coal fields where miners are good buyers when employed. On the other hand the steel trade was never in a stronger position and at best can be little affected by the strike of the miners owing to certain agreements and provisions for the fuel supply that make this impossible.

Favorable comment has been made on the unusually high character of the stocks being displayed in the store windows, and the artistic effects of this display have, as a general rule, been more pronounced than usual. Some of the dealers are employing window decorators for the first time this season and others admit that they have given this subject more study and thought than ever before. While it is a little early to talk of trips to Amsterdam and other foreign cities, a good many assurances are given among the trade here that they will be on the passenger lists of some ocean liners within the next six months, and will do some importing direct and this time through the Pittsburg custom house. The little shaking up that Sam Sipe gave the dealers last winter is having an effect that is both amusing and interesting on this account.

Special sales are quite common just now in silverware and it is evident that an effort is being made to reduce the goods in stock before warm weather,

WatchesDiamonds**RIGHT BUYING means RIGHT SELLING**

The retailer's first profit is in the proper purchase of stock, and the first essential of proper purchasing is the selection of a wholesale house that assures satisfaction in goods, prices and service. Our new spring lines have been selected with the greatest care, by experts who are equally well posted on the goods YOU want and the wants of the trade. Our stock, experience and expert knowledge are at the service of every buyer.

OUR ANNUAL SPRING IMPORTATION OF DIAMONDS is now ready for inspection
We would advise our customers to give this their immediate attention

D. C. PERCIVAL & CO., INC.

Manufacturers and Jobbers only of Watches, Diamonds, Jewelry, Silverware, Cut Glass
and a Complete Material Department

373 WASHINGTON STREET, BOSTON, MASS.

JewelryCut GlassSilverware

The Emblem Jewelry Manufacturing Co.
Makers of Diamond Mountings

Fine repairing and stone setting. All jobbing stones furnished. Presentation jewels and medals. All first-class work. Refiners of old gold and silver; highest cash price paid.

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Klein School of Optics
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The best and most thoroughly equipped optical school in America. We train pupils to obtain a thorough knowledge of the optical profession. For this reason we want men and women who are anxious to learn, persons who are willing to devote all their time to study. We do not want any diploma-hunters—such persons do not need apply. We charge more for instruction, but you will find that it is the best investment you made in your life. Money may go astray, but knowledge is never lost. Full course, \$75.00. Address, KLEIN SCHOOL OF OPTICS
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Latest styles and artistic monograms in all metals. Monogram fobs, belt buckles and brooches a specialty.

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**FIRST-CLASS
JEWELRY REPAIRING
FOR THE TRADE**

DIAMOND SETTING
SPECIAL ORDERS PROMPTLY FILLED
MASONIC JEWELS
FINE HAND CARVING

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JEWELERS' BUILDING, ROOM 76 TEL. 1795-4 MAIN
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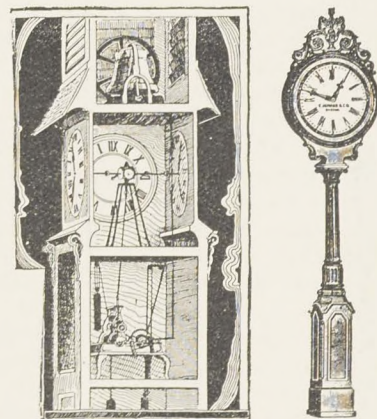
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Especially attention given to Watch Case
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Normal Conditions for the Season

March opened up poorly for both wholesaler and retailer, but after the first week showed a decided improvement for the better. Fear of the consequences of the threatened coal strike undoubtedly had much to do with the scarcity of business, while repeated confirmation of the report of the enormous supply of coal held by the coal barons had much to do with restoring confidence which was at first lacking. While both miners and the mine owners are well supplied with funds to carry on the strike, and the owners have an extra large supply of coal on hand, it is doubtful if even though a strike were declared, it would have any serious or lasting effect on trade. The prosperous conditions existing throughout the country will more than offset any damage that can be done, even though it is impossible to avert a strike.

Arthur R. Grover, who has for some years past been conducting a jewelry business with desk room at the store of H. H. Savage, has purchased the store in Dock Square, formerly run under the name of the Jacobs Diamond Mine. Being a very shrewd business man, he will undoubtedly make a success of a stand which heretofore has not been the diamond mine it was claimed to be.

William A. Lamb, the Boston representative of the Cohannet Silver Co., of Taunton, Mass., whose office was formerly located on Congress Street, has removed to the Jewelers' Building. His new office, in the heart of the jewelry district, will undoubtedly have much to do with increasing his patronage.

Genial Dad Nathan, the cigar dealer of the Jewelers' Building, who is to jewelers what John, the orange man, is to Harvard students, has succeeded in acquiring a most valuable location on Bromfield Street from the Boston Tailoring Co. While the store is very small, it will undoubtedly meet with success from the start, as it is his intention to carry a good line of fine cigars, and he has no competition near at hand. He will still retain his old stand in the Jewelers' Building.

The many friends of E. B. Jackson, assistant to the purchasing agent of the Waltham Watch Co., have been congratulating him on the arrival of a new member in the family.

The Colonial Diamond Co. are now holding an exhibit on State Street, Boston, where they are selling the stock of the company. They derive their output from British Guiana, South America.

Samuel Adelberg, who has been doing a lucrative business in the building at the corner of Washington and Bromfield Streets, occupying with one exception the narrowest jewelry store in the city of Boston, has been obliged to remove, as the building is about to be torn down. He is now located at the corner of School and Washington Streets.

We were recently informed that a new member had been added to the firm of Myers & Franks, of Boston. His name is Robert Franks, and he is just about one month old. Congratulations are in order. The above-mentioned concern have added to their store a balcony which covers the rear part of their establishment, increasing their present floor of 7400 feet by one-third. The watchmakers,

jewelry repairers, engravers and the grinding room will be located in this balcony, while the space beneath will be devoted to a better and more complete testing room. The improvements give them the opportunity for a larger display of jewelry and silverware.

The many Boston friends of H. I. Bornstein, of the Tremont Jewelry Co., will now have that long-postponed opportunity of congratulating him on his marriage. He was married in New York City on January 10th, and sailed for Europe on his honeymoon the 13th of the month. After traveling extensively over the continent, he sailed for New York March 13th, and is now in Boston trying hard to get back to business.

Henry Arnold, with D. C. Percival & Co., is slowly recovering from the effects of the operation which he underwent shortly after Christmas. He is able to go out and about short distances, but is still very weak, weighing twenty-five pounds less than before the operation.

Mr. Newell, the well-known Lynn optician, has moved his optical establishment directly across Market Street from where he was previously located. His new quarters are more spacious and well fitted for his increasing patronage.

H. A. Stone, of Ayer, Mass., recently died at his home of Bright's disease. He was favorably known and a prominent Massachusetts jeweler. He is survived by a wife and four children.

Ed. C. Swett, who was for years located on Congress Street, Portland, Maine, died March 10th. Mr. Swett retired from an active interest in the jewelry business some years ago.

George M. Wheldon, who was formerly connected with F. J. Whilton, of Boston, has started a small establishment at Codman Square, Dorchester, for the repairing of watches and jewelry.

A number of improvements have been made in the Boston office of E. A. Cowan. They have taken the room next to them which was vacated by C. N. Quimby on his removal. New wall cases and offices as well as a number of other changes have been made.

F. B. Chace, the Boston material dealer, has changed his location from 403 Washington Street to the Jewelers' Building, 373 Washington Street, where he enjoys increased space and carries a larger and more complete stock.

Illustrated Lectures on Watchmaking

The first illustrated lecture before the New England Watchmakers' Club, given by H. E. Duncan, on the 27th of March, was a decided success, both

as to the lecture and attendance. The object of the club is to advance the members' knowledge of practical watchmaking, repairing and kindred subjects. After the completion of the lectures a grand banquet will probably be given the members of the organization. The officers of the association are: President, F. W. Ruggles; secretary, J. S. Lowell; treasurer, Wm. E. Geyer; directors, F. R. Cunningham, Wm. B. Garfield, M. H. Keyes, F. T. Lovejoy and H. S. Reynolds.

E. P. Leonard, who has been employed with the Globe Optical Co. for the past eight years, is now with the Boston Optical Co. He will cover local territory.

George L. Kerr, of Cornish, Me., has purchased one-half of Central Block, in that city, and has moved in his stock of jewelry.

W. E. Billings, a well-known jeweler, of Milford, N. H., is manager of the Milford Basket Ball Club. The team under his management has won an enviable reputation, having lost but two out of the fifteen games played this year to date.

Extensive alterations have just been completed in the store of F. H. Jessup, of Wareham, Mass. New show cases and a new lighting system are among the changes.

The Ideal Silver Plate Co., which was organized in Portland, Conn., have installed the machinery in their factory, and are just about to begin operations.

W. U. Hellenbrand, of Old Town, Me., has fitted up two rooms over his store, one to be used as an office, the other as an operating room. Mr. Hellenbrand is a graduate optician.

C. T. Ridgeway, of Nashua, N. H., recently died at his home, at the age of ninety-one years. He had been in the jewelry business in Nashua since 1834, and was the oldest Odd Fellow in the State. He was born in Gorton, Mass., and leaves a grandson.

George C. Storer, who has for some time past been with Alfred Nathan, has now accepted a position with H. E. Alsterlund & Co.

An entire new front has been built on the Hanover Street store of Harry Long. Besides the front the entire store has been remodeled and lowered to the level of the street. Mr. Long has been in this country but twelve years, yet his success is most phenomenal, considering the fact that he was unable to speak a word of English on his arrival.

D. C. Percival, Jr., has returned from a three-weeks' trip to Atlantic City. His health is greatly improved by the vacation.

I. Alberts, who has for some years past been located on the sixth floor of the Jewelers' Building, will soon move to more spacious quarters, where he will have the entire seventh floor of the Jewelers' Building Annex.

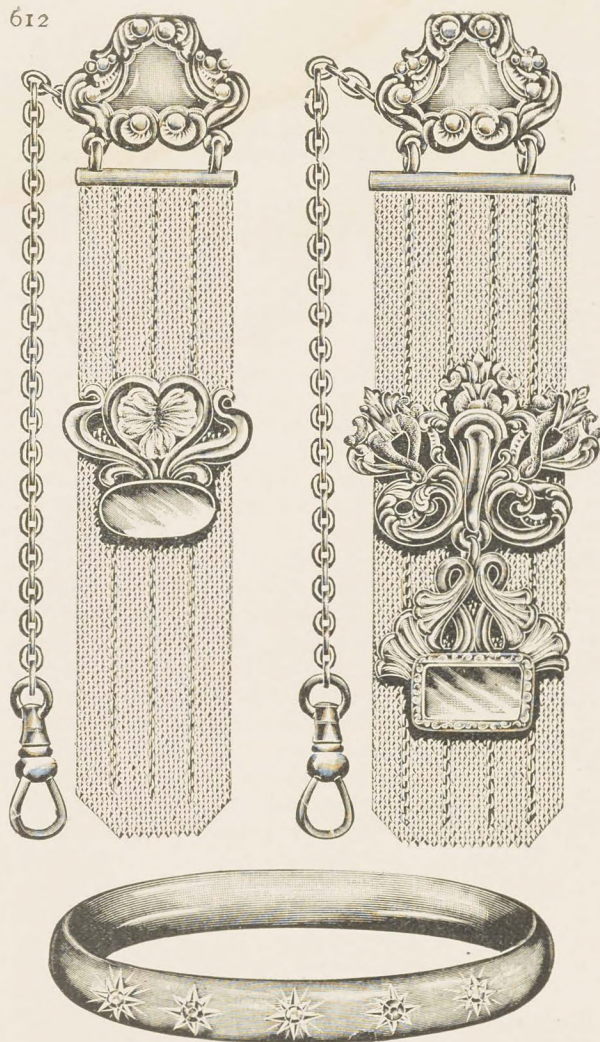
The Franklin car recently purchased by J. B. Humphrey, is at present tied up in the paint shop, where, unfortunately, shortly after its arrival, the painters went out on a strike.

R. A. Lohnes has recently purchased a large touring car, in which he and his friends will undoubtedly have many fine trips during the coming summer through the beautiful country about Worcester.

Among the visiting jewelers seen in this market recently were: M. J. Gillespie, Leominster, Mass.; Jos. Lajoie, Worcester, Mass.; Geo. H. Griffin, Portland, Me.; A. E. Garnsey, Sanford, Me.; Mr. Keith, of J. A. Merrill & Co., Portland, Me.; F. J. Goodridge, Waterville, Me.; R. A. Lohnes, Worcester, Mass.; P. H. McCarthy, Springfield, Mass.; J. J. Keefe, Newport, R. I.; E. J. Hodgdon, Haverhill, Mass.; Mrs. Fred Gray, Lowell, Mass.; L. F. Burke, Haverhill, Mass.; F. H. Jessup, Wareham, Mass.

Wonders of Fine Measurement

Among practical devices for the application of the wave-length of light as a standard of fine measurement for scientific purposes is the elasmometer, an instrument to which are credited results in the accurate determination of changes of dimension or position too small to be ascertainable with precision by mechanical means, and often entirely invisible to the naked eye. In measuring, for instance, the bending, under slight weights, of bits of metal only two centimeters long, it is said that the elasmometer gives results which are probably more accurate than the best mechanical methods can give with bars of metal two feet long. In the elasmometer the interference bands produced by waves of red hydrogen light crossing from two reflecting surfaces furnish the means of measurement.



C. A. MARSH & CO.

Attleboro, Mass.

Makers of

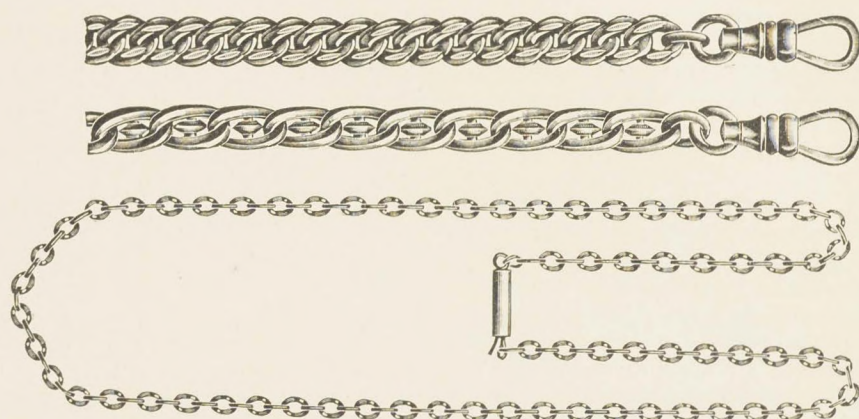


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and give satisfaction

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BLIND-JOINT BRACELETS
CHAIN BRACELETS and CHATELAINE PINS
NEW STYLES CONSTANTLY

Ask Your Jobber for Them



Bastian Class Pins and Badges

When you handle **Bastian Bros. Class Pins and Badges**, you handle goods that are known to every intelligent person wherever English is spoken. We have advertised extensively and persistently in Leading Magazines until the name of Bastian bears the same relation to class pins that the name Elgin does to a watch.

No other manufacturer can meet our prices—it is an impossibility for him to do so—because we own the only patented process whereby one girl with one machine can do the work of six skilled workmen.

Note these prices:

Silver-plated Pins, per doz.	\$1.00
Sterling Silver Pins, " "	2.50
Cold Plate, . . . " "	3.00
Solid Gold, . . . " "	15.00

25% Discount to Retailers

Silver-plated Pins retail at 10 cents and Sterling Silver at 25 cents. They are finely made of heavy metal, and on the Sterling Silver Pins the best French enamel is used.

We also make to order Badges, Medals and Buttons in either Gold, Silver, Bronze or Ribbon, and we rigidly guarantee everything we make.

Our Handsome New Catalogue
is Free to Jewelers



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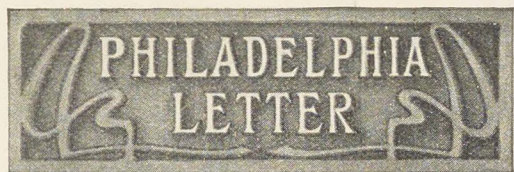


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BASTIAN BROS., R-21 South Avenue, Rochester, N. Y.



Southern Buyers Dined

Southern salesmen for local firms took advantage of the presence here of many buyers for firms in their territory, who came to lay in stocks of spring and summer goods, to tender them a banquet at the Windsor Hotel, on the evening of March 7th. Covers were laid for about sixty, and fully a third of those present were guests hailing from a wide range of Southern territory. All the salesmen present were members of the Merchants' and Travelers' Association. The principal firms of the city, in every department of trade, were represented. Since the Baltimore fire an impetus has been given Philadelphia trade in the South, and this is particularly true of North Carolina. Fully half the buyers present at the banquet represented firms in that State. Favors were cardboard traveling bags covered with tags of steamship lines and foreign hotels.

An Historic Timepiece

A unique horological curio attracted considerable attention while exhibited for a few days last month in the window of J. E. Caldwell & Co. The exhibit was the watch of Charles I of England, made for the King by Robert Seignior, of London, in 1640. After King Charles was beheaded in 1649, it came into the hands of Charles II, then Prince Charles. On September 3, 1651, after the battle of Worcester, the watch was taken from the Prince's coach, which had been abandoned in his flight. It thus fell into the hands of Cromwell who retained it until his death. At the restoration, after Charles II was crowned, Cromwell's goods were disposed of by auction sale, and this watch was obtained by Joseph Kipling, Overstone House, Northands, an ancestor of the present owner. It has been retained in his family and handed down as an heirloom since that date. It strikes the hour on a bell and also strikes an alarm. It is a verge movement and is a pair-case watch, the outer case being leather encrusted with nails. The inner case is silver, pierced and engraved very beautifully.

R. H. Woodrow, for many years connected with M. Sickles & Sons, and now manager of the jewelry department of Cross & Beguelin, New York, was a visitor last month and greeted his many friends in the trade here who were glad to learn of his success in his present place. This department is now as important a factor in the firm's business as the material or watch departments—due largely to the skill and energy put into its direction by the new manager.

Fred. J. Bloomhall, a jeweler, of Conshohocken, has been elected a Burgess of that place.

Fred. T. Barry, of this city, who is now a member of the traveling force of S. O. Bigney & Co., of Attleboro, recently visited his family after a seven-weeks' trip in the West.

Abe Sickles, of M. Sickles & Sons, will sail for Europe on April 12th on the *Kronprinz*, of the North German-Lloyd Steamship Co. He will visit Amsterdam, Antwerp, Paris, etc., in quest of select diamond stock for his firm's patrons. Sol Sickles, of the same firm, will make the trip to the Pacific Coast with the delegates to the convention of the Nobles of the Mystic Shrine. Congenial companionship ensures a most enjoyable trip.

B. F. Hodgins, an experienced salesman, is the latest addition to the road force of L. P. White. Mr. Hodgins was formerly with Tarrant & Gismond, of New York, and had previously been connected with the old Waterbury Watch Co. His territory will comprise several of the Southern States.

The firm of Geo. Mayer & Co., manufacturers of optical goods, has been dissolved by mutual consent, Walter Mayer withdrawing. Gabriel Mayer will continue the business under the old name, receiving all accounts due the firm and making all payments for accounts due others.

C. F. Rumpp & Sons, Fifth and Cherry Streets, have issued a handsome booklet, containing rich half-tone illustrations of the many interesting articles of fine leather manufactured by this firm, together with some imported specialties such as genuine English hogskin card cases, letter cases, auto lunch baskets, kit bags, shawl straps, carryalls, etc. The booklet is printed on high-class enameled paper, and the cover is embellished by an excellent picture of the firm's factory.

Charles H. Hambly, watch, jewelry and diamond dealer, has closed his store at 158 North Eighth Street, and in response to the rapid downtown movement has become established at 19 South Eighth Street. Jeweler Hambly is well known in this section, having occupied the store on North Eighth Street for fifteen years.

Fred. B. Hurlburt, of H. O. Hurlburt & Sons, accompanied by his wife, started last month on a pleasure trip to the Bahama Islands, the floral paradise of the Atlantic.

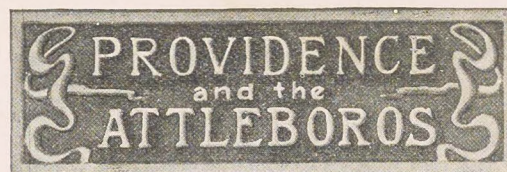
By a happy coincidence quite a number of prominent members of the local trade met at Hot Springs, Va., last month. Among them were L. P. White, J. Warner Hutchins and C. F. Duffy, leading spirits in the Jewelers' Club; C. M. Fogg, of The Keystone Watch Case Co., and E. R. Crippen, of the Philadelphia Watch Case Co. Louis Sickles, fresh from his convalescing sojourn in Florida, and completely recovered from his recent illness, also passed the month at this famous resort. He was accompanied by Mrs. Sickles and their baby boy. Mr. Sickles was the recipient of the congratulations of his brother jewelers on his complete restoration to health.

W. J. Brand, a member of the force of M. Sickles & Sons, was married last month to Miss Edna Crump, an estimable young lady of this city. After a tour of the summer resorts the couple will make their home on Sixty-third Street, West Philadelphia.

L. P. White made a pleasant trip South last month to act as best man for a brother member of the Jewelers' Club on the occasion of his marriage to a young lady of Charlotte, N. C.

H. Garfinkel, formerly located at 1223 Market Street, has moved into handsome new quarters in the Mint Arcade Building.

The businesses of the firms of Hoover & Smith and Davis & Clegg, of this city, have been consolidated under the corporate name of the Hoover & Smith Co., the members of the company being J. D. Hoover, Edgar A. Smith, William J. Davis and Charles A. Clegg. The consolidation is a very natural one, being composed of the two firms who originally took over the retail business of Simons, Bro. & Co., when that firm decided to abandon its retail department and confine itself entirely to the manufacture of gold jewelry and silverware. The new company's handsome store at 616 Chestnut Street, is being improved and rearranged to accommodate the greater business resulting from the amalgamation.



The Plainville Stock Co., of Plainville, Mass., have erected an addition to their building, measuring 34 x 30 feet, in order to accommodate an increasing volume of business.

E. I. Franklin & Co., North Attleboro, announce that after May 1st they will be represented in New York by W. G. Lemhart, whose predecessor, Harry E. Fisher, will, after the date named, represent Furbush, Swift & Fisher—the firm in which he is a partner.

S. Frenkel, the Toronto, Canada, jobber, was a visitor to this market last month for the first time, although he has been dealing with a number of our manufacturers for a long time. As one manufacturer said, after being a regular and valued customer on our books for about a quarter of a century, we were certainly glad to meet Mr. Frenkel and have him visit us and look over our plant.

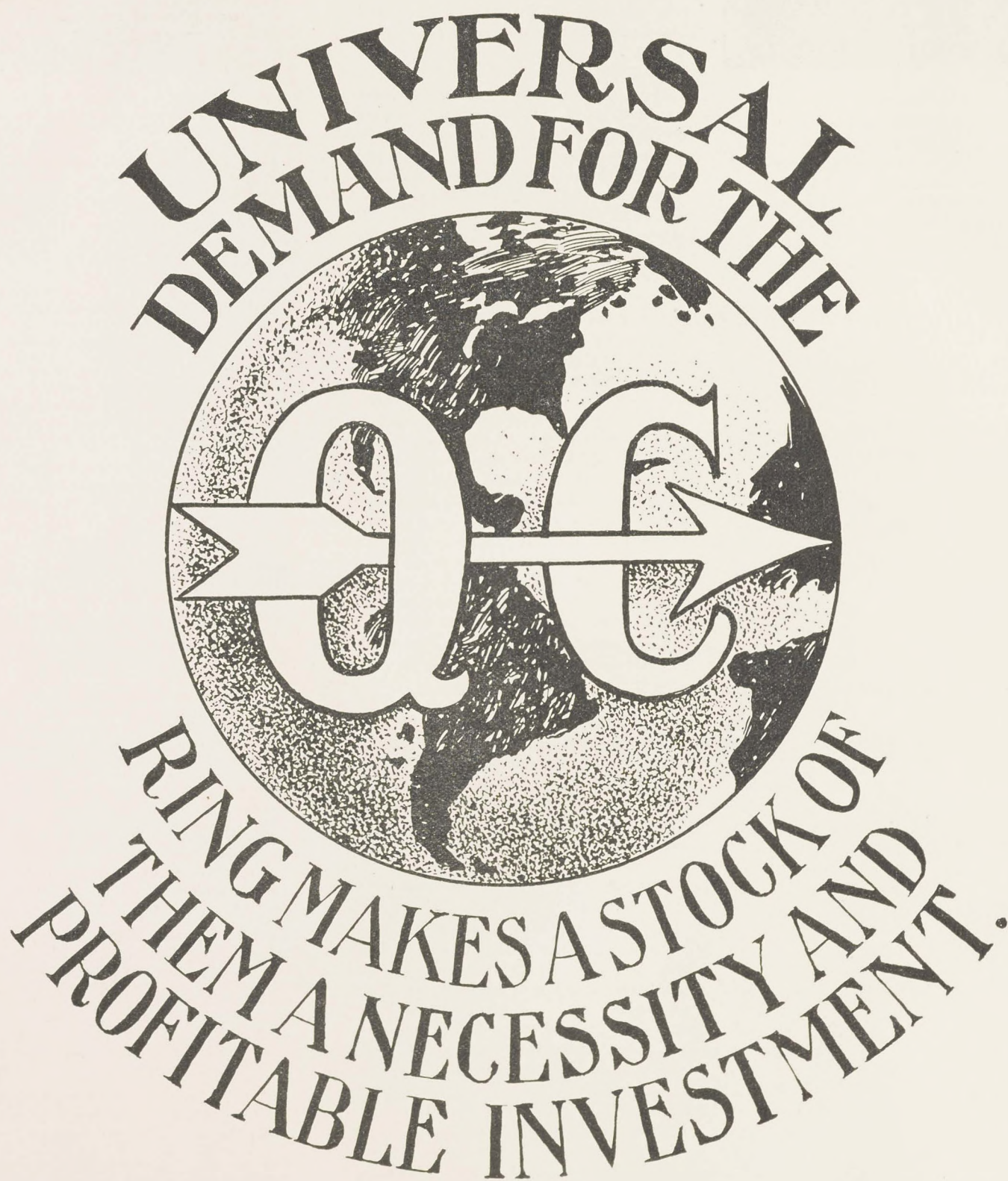
Williams & Anderson, emblem makers, Providence, have changed their location in that city from 220 Eddy Street to 33 Broad Street. In their new quarters they enjoy the extra space and better lighting and general facilities necessitated by their increasing business. The officers of the company are Sidney Williams, president and general manager; Samuel Anderson, vice-president, and Walter E. Ensign, secretary and treasurer. The latter is also the traveling representative of the firm.

The Cook, Dunbar, Smith Co., of Providence, notice of whose incorporation was published in these columns last month, is becoming established in the Ada Building, on Sprague Street, in that city. High-class machinery is being installed in this building for the prosecution of a plating business, in which line the organizer of the company, Clarence M. Dunbar, hitherto a partner in Dunbar, Leach & Garner Co., Attleboro, has had considerable experience, while his partners, Charles D. Cook, formerly of the Improved Seamless Wire Co., Providence, and Robert E. Smith, another well-known Providence business man, bring a large fund of mercantile and mechanical knowledge to the new enterprise.

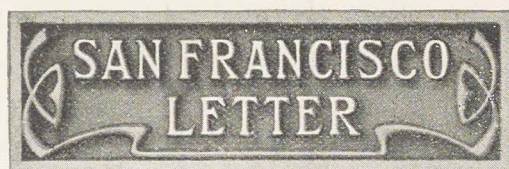
Frank B. Reynolds, of the Cory & Reynolds Co., Congress Avenue, Providence, has purchased the respective interests of J. P. Cory, T. B. Cory and A. H. Cory, Jr., in that concern. The officers of the company are now as follows: President, John S. Brant; vice-president, Oliver W. Remington; secretary, Frank A. Cushing; treasurer and general manager, F. B. Reynolds. Each of the foregoing has been with the company for a number of years. These, in addition to William A. Burt, the company's New York salesman, also compose the board of directors. In further pursuance of this policy of identity between the executive and operative departments, it is the company's intention to award a percentage of the annual profits to all employees who will have remained with them one year from the date of reorganization. Mr. Reynolds, personally, has purchased the plot, comprising 21,000 square feet, upon which the factory is located, together with an adjacent dwelling house.

W. S. Metcalf, of the Plainville Stock Co., Plainville, has declined a second term as selectman, much against the wishes of his host of friends.

The Charles M. Robbins Co., Attleboro, recently received the handsome gold medal awarded for its exhibit at the St. Louis exposition.



The Queen City Ring Mfg. Co.
Buffalo, N. Y.



The clearings of the banks of San Francisco came near touching the fifty million mark last week, reaching \$49,445,630, an increase of 33.4 per cent. over those of the corresponding week in 1905. This showing of the volume of the business of the city is paralleled in the records of building contracts for January, February and March to date, which show a phenomenal increase over those of the first eleven weeks of last year, aggregating \$5,015,210.

The police of Vancouver have arrested one man for alleged participation in the robbery of diamonds from McMillan's jewelry store, reported in our last issue. The man is now in jail, and gives his name as Harry Hazard. About six thousand dollars' worth of the stolen goods have been recovered. Hazard confessed to the police that he broke the window of Jeweler McMillan's store and stole the diamonds. He said that he worked in conjunction with a man whom he met on a steamer while en route to Vancouver from Seattle, and who worked in the Leland Hotel until recently. The diamonds that were recovered were found in the safe deposit vault of the Royal Bank, others were concealed under a sidewalk in Pender Street, and some were found in the barrel of Hazard's revolver when the police captured him.

Max Armstone, a young jeweler, formerly located in New York, came to San Francisco recently with the intention of engaging in the jewelry business. Joe Brachman, a relative who resides in this city, has requested the local police to search for Mr. Armstone, as he has been missing for quite some time. The missing man when last seen by his relative was in possession of a large sum of money, which was the proceeds of New York business, and fears that his cousin has met with foul play.

Francis T. Sargent, the Point Richmond jeweler, who kept up his stock by robbing San Francisco wholesale jewelers, with whom he did business, was convicted of grand larceny by a jury sitting before Judge Dunne recently. It will be recalled that just previous to the holidays of last year, Sargent made it a practice to examine one lot of jewelry and then request the salesman to show him something else, and in the brief absence of the clerk he purloined whatever struck his fancy. His plans were all so well carried out, that though the loss would be discovered without delay, it was impossible to single him out as the culprit, and several of the dealers were loth to offend a regular though small customer. A. Eisenberg & Co. is given the credit for the capture and conviction of this ex-jeweler.

T. G. Patton, of Placerville, spent his semi-annual vacation in San Francisco last month, and called upon his many friends among the wholesale jewelry trade. Mr. Patton reports business in his section as being up to his expectations, and predicts a very good future, as the rains in his section have been both seasonable and plentiful.

M. Farber has purchased the stock and fixtures of the retail jewelry store at 1223 Market Street, formerly owned by A. M. Samuels, and will reopen after the premises are repapered and refinished.

S. H. Collins, after being located on Kearny Street for over thirty years, has been compelled to

give up his old location, as his lease has expired. The United Cigar Co. will occupy the old stand after suitable alterations and improvements are made. Mr. Collins will try and find a new location upon this same street, even if he has to go north of his old store.

Harry Oberlin, the progressive retail jeweler of Fresno, Cal., and wife, spent a delightful two-weeks' vacation in and around San Francisco last month, and incidentally called upon his many friends among the jewelry trade. Mr. Oberlin predicts a prosperous season, for the entire San Joaquin Valley, as the rains during the season have been all that could be desired.

Mr. and Mrs. Fred. Roth, of M. Schussler & Co., are now visiting their many friends in the East, and will sail for Europe some time in the near future. The travelers will spend at least three months abroad. Mr. Roth will combine business with pleasure while on the other side by buying anything in the way of precious stones that appeals to his judgment.

L. O. Levinson, of the California Jewelry Co., is back among his California friends again, after spending a year among the diamond brokers of Europe, in the interests of his company. G. Marcus is preparing to leave here to be away a year or more. This diamond and precious stone firm, beginning with January, 1905, inaugurated the custom of continually keeping a representative abroad, picking up suitable papers of 'stones' for their Pacific coast trade, and we are led to believe are reaping good results from the venture.

J. C. Wahlen, the retailer from Petaluma, was among the out-of-town buyers in this market recently, and incidentally purchased a line of novelties for his Easter trade. To those of our readers who are not familiar with Mr. Wahlen's town, we would state that Petaluma is the largest poultry raising community in the United States, and consequently a very busy and hustling place, particularly around Easter.

C. W. Wickersham, president of the Wickersham Co., retail jewelers, of Bakersfield, Cal., was in this market recently upon his semi-annual purchasing trip, and returned home after spending a week with us. Mr. Wickersham quotes the oil business in Kern county as being in a fine condition, as all of the independent producers have combined to fight the Standard Oil Company. The wells will be pumped again, and business generally speaking has decidedly better prospects.

Mr. and Mrs. S. L. Barbour, one of the best-known silver manufacturers of the East, with factories located at Hartford, Conn., spent two weeks recently with their friends in San Francisco. It will be recalled that Mrs. Barbour was the widow of the late H. E. Hall, of A. I. Hall & Son.

Arthur L. Judis, secretary and treasurer of the Alphonse Judis Co., wholesale jewelers, of 708 Market Street, this city, arrived here a few days ago, after visiting his old home. Mr. Judis combined business with pleasure while abroad, and brought a fine assortment of precious stones that he purchased before the recent advance in prices. Mr. Judis predicts a big advance in diamonds in the near future, as he found it a difficult task to find suitable assortments at anything like the present prices to retailers. In some instances he found the European dealers asking more for their wares than the American jobbers were getting from their friends, the retailers, at home.

Fred. Levy, president of M. Schussler & Co., Inc., returned from his annual visit to New York City, feeling greatly benefited by the trip. Mr. Levy was an honored guest at the banquet of the Philadelphia jewelers, held at the Bellevue-Stratford in that city.

Ed. Bastheim and Harold W. Jacobs, of Alphonse Judis Co.'s force, have started up the Masonic ladder. The boys took their first degree the other night in Doric Lodge, No. 216, F. & A. M. Their many friends in the trade are going to get together, so that they will be on hand when the boys work up to the third degree, to help along.

Edwin Webber, a retail jeweler, who conducted a retail jewelry store at 100 McAllister Street, was found dead in his bed at his residence last month by his landlady. Deceased came to his death by asphyxiation. A rubber tube was connected with a gas jet, and the other end was in his mouth. Two canary birds in their cages were also overcome. A parrot whose cage was covered by a sheet escaped and is still alive.

The Gorham Mfg. Co., manufacturers of high-class silverware, are going to open a new showroom, having signed a long lease for the whole Market Street front of the fifth floor of the new Kamm Building, right in the center of the wholesale jewelry district. This new establishment will be under the able management of H. H. Adams, of Phelps & Adams.

E. A. Sutter, of Fairbanks, Alaska, was among the out-of-town tradesmen in the market recently. Mr. Sutter had been visiting points of interest in the East, going as far as New York. Mr. Sutter reports business in the far North as very brisk, and purchased a number of large bills of staples from the local wholesale jewelers before leaving for his home in the arctic circle.

Jesse Waterman, of the firm of M. Schussler & Co., Inc., has returned from a recuperating trip, and looks as though his vacation did him good. Owing to the busy buying season following a very prosperous holiday trade, Mr. Waterman was forced to take a much-needed rest, so after he had his force of travelers out, he spent a two-weeks' vacation visiting all of the winter resorts in the southern section of California.

A. Eisenberg, of the wholesale firm of that name, is contemplating a trip to the wholesale centers of the east, and will possibly sail for Europe about the middle of April, in search of diamonds and other precious stones. During his absence the office will be under the management of Harry Lipman.

Frank Haley, who manages A. I. Hall & Son's mammoth shipping department, is expected back to his old quarters after an enforced absence of two months. Frank had the misfortune to break his leg in two places recently, and was finally discharged as cured by his doctors.

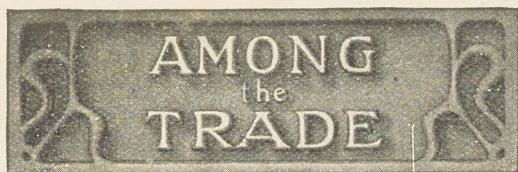
Ben Nordman, Leon Nordman's son, has joined Nordman Bros. office force, making the fifth one in the family who are allied with this jewelry and material house. Berthold Nordman is filling the position of advertising manager, vacated recently by W. K. Day, who has accepted a position with Lichtenstein Bros., the Stockton Street jewelers.

H. C. Nan Ness recently moved from his old location at 115 Kearny Street to the new jewelry building at 717 Market Street, making a welcome addition to the large number of dealers who have acquired quarters in the above-mentioned new building.

Eugene Wachhorst, of the H. Wachhorst Co., pioneer retail jewelers and silversmiths of the capitol city, passed through this city en route from Los Angeles recently. Mr. Wachhorst never misses a chance to visit this market, as it enables him to keep brushed up on things salable.

Phelps & Adams, the wholesale watch house, of 120 Sutter Street, are going to remodel their office and showroom, and in the future will be in a position to give more time and attention to their increasing watch and jewelry business.

Edson Adams, who for the past ten years was connected with M. J. Averbek, wholesale jeweler of New York City, recently resigned his position to come to this city to go into business with his brother, of the old firm of Phelps & Adams, manufacturers' agents on the coast. Mr. Adams went to Averbek as a clerk, starting in at the bottom rung of the ladder, and worked his way up through all the different departments of the business, both inside and on the road, until at the time of his leaving he was Mr. Averbek's chief assistant, and one which he regretted very much to lose. Although young in years, he has already acquired a reputation for being a keen and able business man, thoroughly understanding all branches of the trade. His many friends in the east and middle States join in wishing him still greater prosperity in his new business connections in this city.



The trade are invited to send us reliable items of news for this department

Colorado

S. Bowley has succeeded to the business of John D. Allen, 412 Sixteenth Street, Denver, having hitherto been in Jeweler Allen's employment. He learned the jewelry business in England and came to this country in 1879, serving at different times with Robinson Bros., Council Bluffs, Iowa, and with a number of other firms before entering the services of Jeweler Allen.

Frank S. Balster, the enterprising jeweler-optician, of Durango, is a thorough believer in business publicity and rarely does a favorable opportunity for economic advertising escape him. He endeavors to impart novelty and originality to his advertisements, with very interesting results. He uses business cards of various sizes, all of which he utilizes to advertise a particular feature of his business. Some are made to serve as simple tests for visual defects, others call attention to his superior stationery, and still others to his diamond stock. This class of advertising should become popular, as there is no reason in our practical age why the business card should not be made to yield the fullest possible quota of profitable publicity.

Georgia

F. J. Flannery, for the past ten years in the employ of H. S. Banta, Newnan, has opened a repair shop for himself.

Illinois

Oliver M. Campbell's new jewelry store, Abingdon, was formally opened a short time ago and a large number of visitors inspected the remodeled premises, including many ladies. To each of the latter was given a handsome souvenir. The new store is thoroughly modern in its appointments. New counters and show cases have been installed to accommodate the complete new stock of jewelry and silverware lately put in by Jeweler Campbell.

John F. Pappmeier, of Pappmeier & Sons, jewelers, Beardstown, died suddenly, last month, aged seventy-six years. He attended to his business up to the day preceding his death, appeared in good health upon retiring to rest, but failed to respond to a call next morning, having died during the night. Deceased was born in Hanover, Germany, and was brought to America by his parents when a child. The family settled on a farm near Beardstown, and when the subject of this obituary attained to manhood, he learned the jewelry business in that place. In 1856 he opened a small watch repairing shop, but a few years afterwards built a large brick store and residence, which property has ever since been his home. In later years his sons were taken into the business and the firm-name was changed to Pappmeier & Sons. The business was afterwards removed to another and more commodious store, in which a stock of diamonds, silverware, etc., was installed. Still later, the business was removed across the street to the present location. Deceased is survived by a widow, two sons and two married daughters.

Indiana

J. H. Young, the popular Fort Wayne jeweler, has changed his location in that city, having removed one door north of his old premises. His new store is commodious and handsomely arranged and well adapted to the needs of his growing business.

Iowa

W. P. Strain & Co., Rock Rapids, have enlisted the services of C. L. Benway, formerly of Lake Preston, S. Dak., as watchmaker.

Kansas

Emile Bourquin, of Emile Bourquin & Son, Horton, and his family, have been receiving the sympathy of their many friends upon the accidental death of Mr. Bourquin's son, Henry R. Bourquin, which sad event occurred at Clarinda, Iowa, a short time ago. The deceased, who was but twenty-two years old and an employee of the Clarinda State Hospital, was hoisting an elevator in that institution when the rope broke and the elevator dropped suddenly, catching Mr. Bourquin's head between its base and the bottom of the shaft and killing him instantaneously.

Maine

P. J. Dinan, the progressive jeweler of Biddeford, has changed his location in that city, having removed from 170 Main Street to 211½ Main Street. His new store is a modern and attractive establishment, affording good facilities for his growing business. Numerous visitors attended its formal opening, and many were the compliments paid to the enterprising proprietor upon the pretty appearance of his new quarters. Jeweler Dinan is well known in Biddeford and vicinity, having been with S. G. Twambly & Son for about ten years prior to opening business for himself. The opening of his new establishment was made the subject of a eulogistic notice in the Biddeford *Daily Journal*.

Maryland

Amos W. Woodcock, founder of the firm of S. P. Woodcock & Company, Salisbury, died recently after an operation for an intestinal ailment had been performed upon him. Deceased had attained his seventy-sixth year and was well known in the jewelry trade throughout the United States, his career in that business having extended over a period of fifty-five years. To the end, he took a practical interest in the affairs of the firm and repaired watches only three weeks before his death. He was born near Clear Ridge, Pa., in 1830, went to Baltimore in his sixteenth year and learned the jewelry business from his uncle, William Woodcock. Upon finishing his apprenticeship in 1851 he went to Salisbury and remained there until his death. He was the oldest merchant in the town, and a few days prior to his demise, was heard to remark that he was the sole surviving dealer of all who were in business in Salisbury in 1851. In addition to conducting the jewelry business, Mr. Woodcock was for many years extensively engaged in agricultural pursuits.

Michigan

D. E. Hinkley, of Fenton, has admitted his son, R. G. Hinkley, into partnership, and the firm will hereafter be known as D. E. & R. G. Hinkley. This firm has purchased the stock of jewelry, watches, clocks, etc., of C. W. Mosher, of Holly, and R. G. Hinkley, the new partner, who has had a number of years of experience in the trade, will manage this store, while D. E. Hinkley will continue to conduct the store at Fenton, where he has built up a very profitable business, having been connected with the trade in that place for thirty years.

Missouri

Frank Wynne has purchased the jewelry business of Aid Brothers, Gallatin. Jeweler Wynne was born and brought up in Gallatin, and, having a large circle of friends there, will assuredly be successful in his new undertaking. He has had seventeen years' experience in the jewelry business, and some years ago conducted a store in Princeton. Messrs. Aid Bros. will now devote their attention to their stock and fruit interests and to the marketing of a new device.

The death of Charles G. Ludwigs, a long-established and highly-esteemed jeweler, of Lexington, which occurred some time ago, in his seventy-fourth year, was accelerated if not brought about by two accidental falls which he sustained—one in August last, the other in the following November—from the effects of which he never wholly recovered. He continued at his place of business, notwithstanding, up to two weeks before his death. Deceased was a native of Oldenburg, Germany, who, coming to America in his early manhood, settled in Richmond, Va. Here he remained for a year or two, after which he returned to the fatherland. In 1865, however, he again emigrated to this country, located in Lexington and remained there until his death, having built up a very substantial business. He was a member of several secret and beneficial orders, being especially prominent in the society of Odd Fellows. Five children survive him, two daughters and three sons, one of the latter being E. A. Ludwigs, now of Philadelphia, Pa., but who, from 1890 to 1901, conducted the optical department in his father's store.

New York

Calvin J. Wells, of the C. J. Wells Co., Genesee and Liberty Streets, Utica, died at Atlantic City, N. J., on the morning of March 9th, having gone to that resort about five months previously for the benefit of his health. Deceased had completed his fiftieth year, having entered the jewelry business when a young man. He first spent some years in New York and afterwards opened for business in Oneida. About twelve years ago he removed to Utica and there continued in the jewelry business. He was fortunate in having the valuable assistance of his wife in all his undertakings, Mrs. Wells being an accomplished and practical business woman. Deceased was a lover of horses and owned some fast trotters. Much sympathy is felt for his bereaved widow.

Ohio

C. J. Duncan, of Massillon, is becoming established in a handsome new store in that place, comprising two commodious apartments beautifully furnished and especially adapted to the requirements of his jewelry, phonograph and musical instrument business.

Albaugh & Pickering, of Columbus, use as a show-window attraction what they claim to be the largest running watch in the world. It was constructed by E. S. Albaugh, of the firm, and required five years of experimenting and labor to complete it. It weighs 320 pounds, and it is self-winding, automatically, every half hour by an electric motor placed inside the case. The immense timepiece is an excellent advertisement of Mr. Albaugh's skill and makes a unique store attraction.

Pennsylvania

Myer Rothstein, of Rothstein & Lippman Bros., Johnstown, died recently. J. Lippman, of this firm, who is executor of the estate of the deceased, announces that the business of this concern will be carried on as heretofore.

M. R. Swartz, the jeweler, of York, has remodeled and enlarged his store, which is now a neat and attractive establishment in all its features.

South Dakota

F. M. Halstead, formerly of the firm of Stoddard & Halstead, Madison, has accepted a position as watchmaker with A. Duffner, of Watertown.

Schutz & Ketcham have purchased the drug and jewelry business of F. C. Smith, at Madison.

Jones Bros. & Co. is the name of a new drug and jewelry firm at Madison. Wynne Jones, who will have charge of the firm's jewelry department, has been taking a course of instruction at a well-known Chicago school of engraving.



Desdemona
"Like the base Indian,
threw a pearl away
Richer than all his tribe."
OTHELLO.

Diamonds,
Rubies,
Sapphires,
Emeralds,
Turquoises,
Jewels of
every hue.
Precious
metals in
decorative
novelties of
every value.

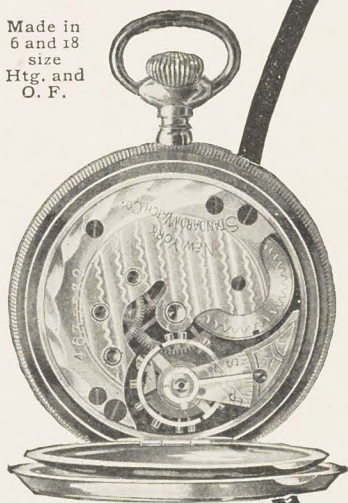
SHAKESPEAREAN CHARACTER, SERIES NUMBER 3.

Eisenstadt Mfg. Co.
St. Louis, Mo. U.S.A.



FISHER STEINBRUEGGE CO. ST. L.

Made in
6 and 18
size
Htg. and
O. F.



**FULLY
GUARANTEED**

—
See Your Jobber

WHAT YOU PAY

is not the only item to consider in purchasing a low-priced line of watches, but if you stock with the

Two New Pendant-Set Models of the **NEW YORK STANDARD WATCH CO.**

You are certain of securing watches
Made Especially for the Jewelry Trade
that are the
Best in the World for the Money

Two finishes—nickel damaskeened or fancy gilt and nickel damaskeened—compensating balance, Breguet hairspring, seven jewels, lever escapement.

New York Standard Watch Co.

Jersey City, N. J.

New England Watches

A few of the choice designs selected
from our Spring line



8513



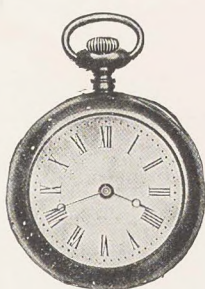
8515



4891



8675



8401

Our series "S S"—the 10 ligne size—is of entirely new construction. The difficulties that were found in the old-style escapement have been entirely overcome. The train has been so reconstructed that the watch will now run 37 hours. This has been thoroughly tested—probably more thoroughly than any other watch on the market to-day.

ELF Watches are the most
up-to-date for a 10 ligne size

No. 4691 Rugby. The ten size men's and boy's hunting in 20-year cases. This is one of a large number of beautiful designs, all of which are very salable.

Accurate, reliable and carry our unquestioned guarantee. All sizes in open-face and hunting cases.

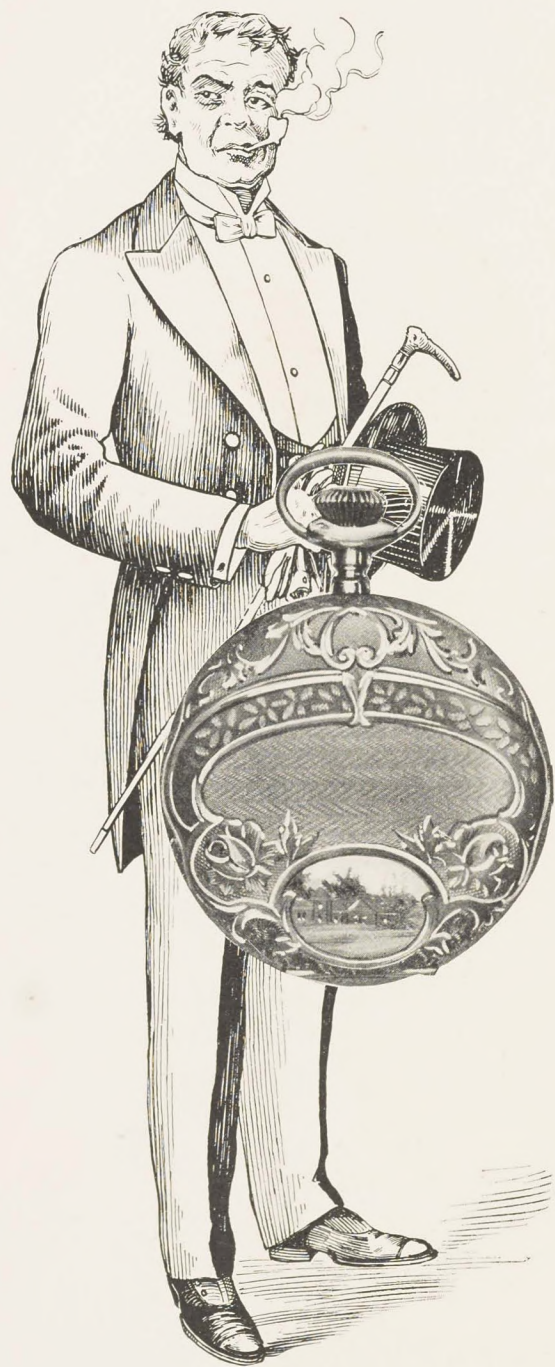
Send to-day for catalogue describing all our lines and prices.

NEW ENGLAND WATCH CO.
WATERBURY, CONN.

37-39 Maiden Lane
NEW YORK

131-137 Wabash Ave.
CHICAGO

Kamm Bldg.
SAN FRANCISCO



“CLOTHES DO NOT NECESSARILY MAKE THE MAN”

neither does a watch case comprise
a finished timepiece, but if you place
a reliable movement in a

Jas. BOSS Case

whether 25 or 20-year grade, the
result is a complete watch of guar-
anteed quality.

The 1906 line of **BOSS** Cases is
of wider variation in new effects and
engravings than ever before.

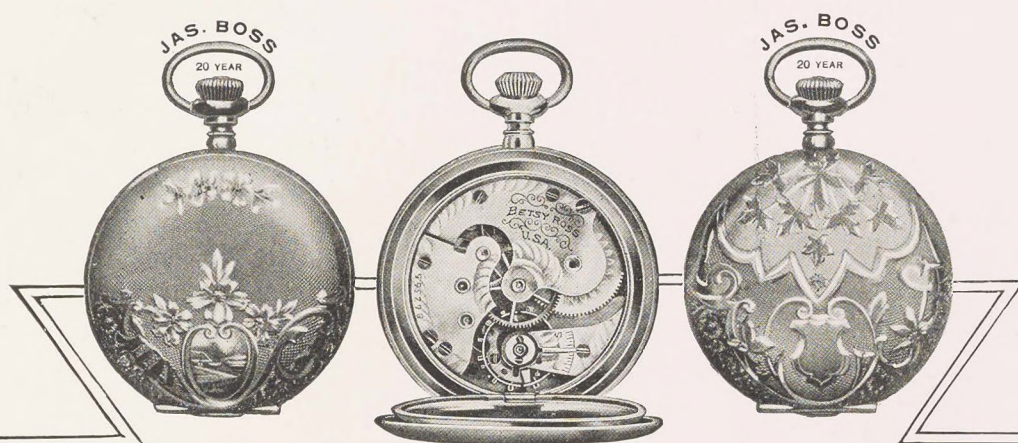
Ask Your Jobber

The Keystone Watch Case Co.

New York
Chicago

Philadelphia

Cincinnati
San Francisco



**The “BETSY ROSS” is
Better Value for the Money Than Any
Other Complete O-Size Watch**

with the additional advantage of appealing to almost
a million members of the “Betsy Ross” Association,
all of whom are interested in the sentimental and
historical circumstances connected with “Betsy
Ross” and the making of the First National
Flag in Philadelphia.

O Size, Hunting or Open-Face, Jas. BOSS 20-year Case
7-Jewel, Pendant-Set, Nickel Movement

Ask your Jobber

The Keystone Watch Case Co.

Philadelphia

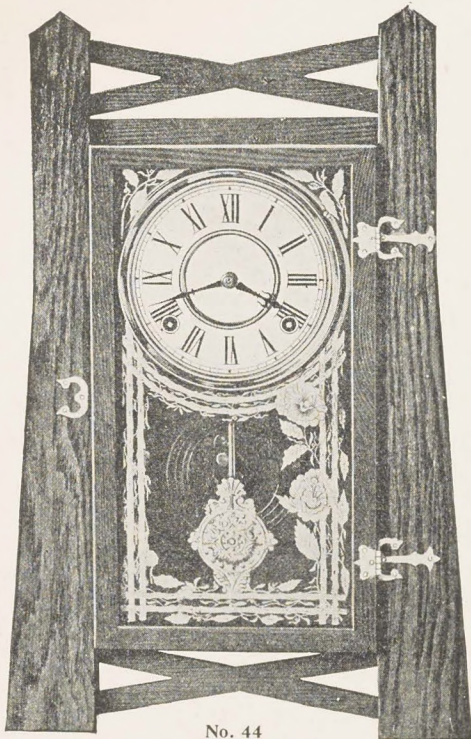
New York
Chicago

Cincinnati
San Francisco

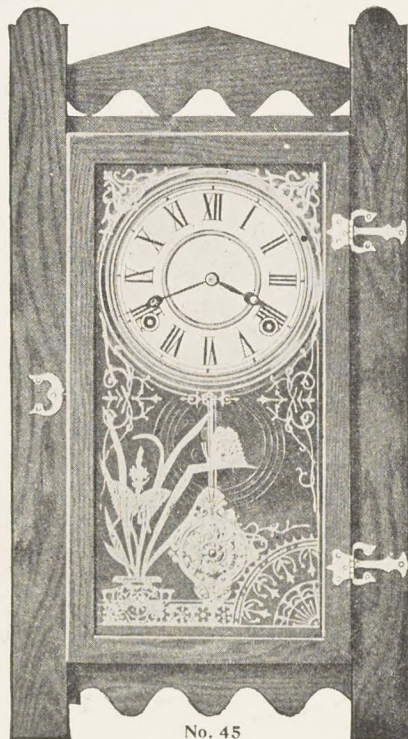
We have an interesting folder on Betsy Ross
Watches for the consumer, and telling how
and where Betsy Ross made the first U. S.
flag. Your name on a quantity for the asking.
Write us and send business card.

"Monterey" Assortment

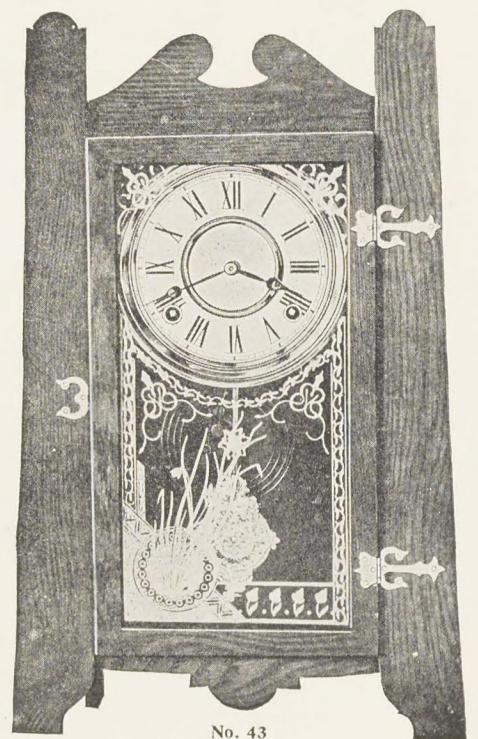
New neat attractive Clocks that can be sold at a **Popular Price**, and an assortment on which the dealers can make a better **Profit**



No. 44
(Patent applied for)



No. 45
(Patent applied for)



No. 43
(Patent applied for)

Eight-day, half-hour strike, mission oak cases, height 20 inches, dials 6 inches, with or without alarm, wire or cathedral bell
Packed three in a case, one of each pattern

FOR SALE BY LEADING JOBBERS

THE SESSIONS CLOCK CO.

Main Offices and Factories, Forestville, Connecticut, U.S.A.

New York Salesrooms, 37 Maiden Lane

Manufacturers of **Marbleized Wood**
Office and Mantel Clocks



Every
Roy
Watch Case
is made
from
Assayed
Gold



**A Perfect 12 Size Plain Bascine
Hunting Case**



and
Quality
is
Guaranteed
as
Stamped

ROY WATCH CASE COMPANY

206 Kearny Street, San Francisco, Cal.

21-23 Maiden Lane, NEW YORK

OUR HAND-MADE CASES

CONSTRUCTED in the old reliable way, entirely turned by hand, giving proper stability, extra finish, shape according to style of movement.

SELLING QUALITY. Individuality. High-tone execution, standing on its own merits, non-competitive. All cases bearing this mark are strictly hand-made:



MANUFACTURED BY

DUBOIS WATCH CASE CO.

Makers of Fine Solid Gold Watch Cases

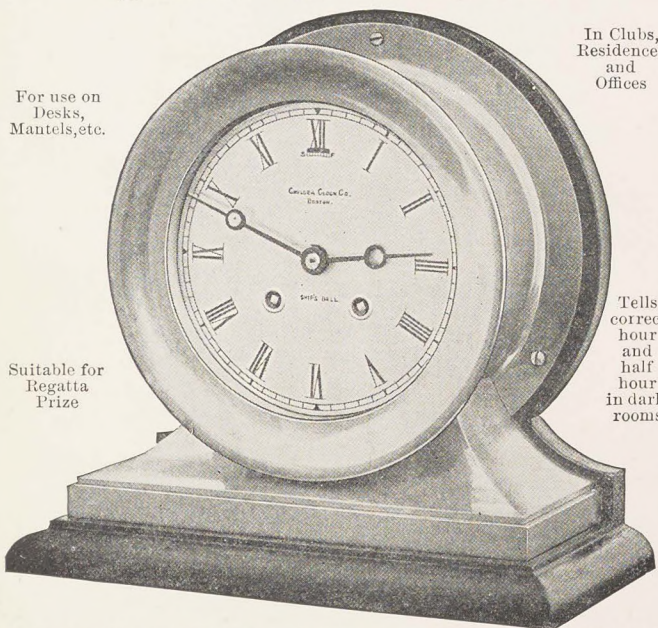
Main Office and Factory

New York Office
21 Maiden Lane

316 Herkimer Street, Brooklyn, N. Y.

"SHIP'S BELL"

For use on
Desks,
Mantels, etc.



Suitable for
Regatta
Prize

In Clubs,
Residences
and
Offices

Tells
correct
hour
and
half
hour
in dark
rooms

THE "CHELSEA" Striking Ship's Bell Clock Fitted with Special Base for use on Desks, Mantels, etc.
Ship's Bell is the best form of Striking Clock for use in sleeping rooms, libraries, etc.

Clock in its round case, also furnished without the Base. Hour and Half Hour Striking and Time (not striking) movements furnished in similar Cases and Bases, when so preferred. Large variety of finishes on Cases and Bases. Auto Clocks always Yellow Brass, Ship's Bell and Marine for use on Yachts, Steamships, etc., Composition Brass, and for use in Residences, Offices, Clubs, etc., Copper Bronze, Black Oxide, Green Bronze, Red Brass, Yellow Brass, etc.

Above are a few of the many styles of Fine Clocks made by Chelsea Clock Co. All are 8-Day, High Grade. These fine goods are dealt in only by Dealers in Best Jewelry, Nautical Instruments and Yachting and Automobile Supplies, and are used by parties demanding the Best.

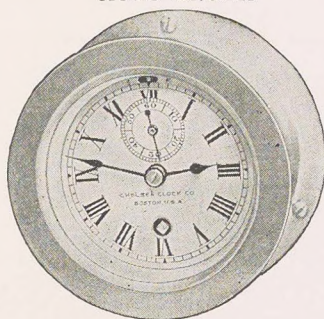
Liberal Discounts to Dealers. Catalogs on application.

Selling Agents for
Pacific Coast

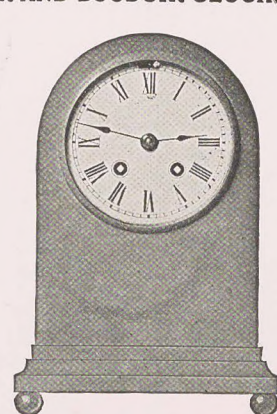
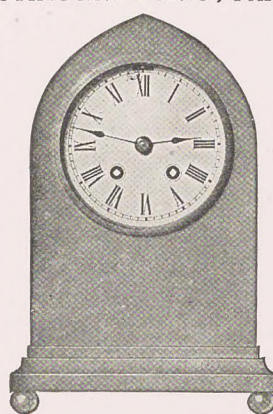
MORGAN & ALLEN CO., 134 Sutter Street, San Francisco, California

YOU want the **BEST?** Ask for the **"CHELSEA"** Clock
"CHELSEA" (TRADE-MARK) C. C. Co. (TRADE-MARK) AUTO CLOCK (TRADE-MARK)

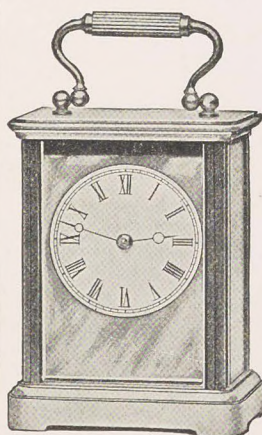
AUTO CLOCK



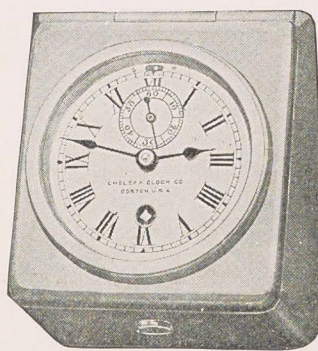
GOTHIC AND DORIC; PARLOR AND BOUDOIR CLOCKS



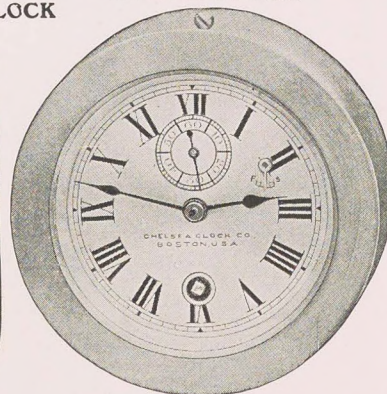
TRAVELING CLOCK



2 3/4 IN. "SPECIAL" AUTO CLOCK



MARINE CLOCK



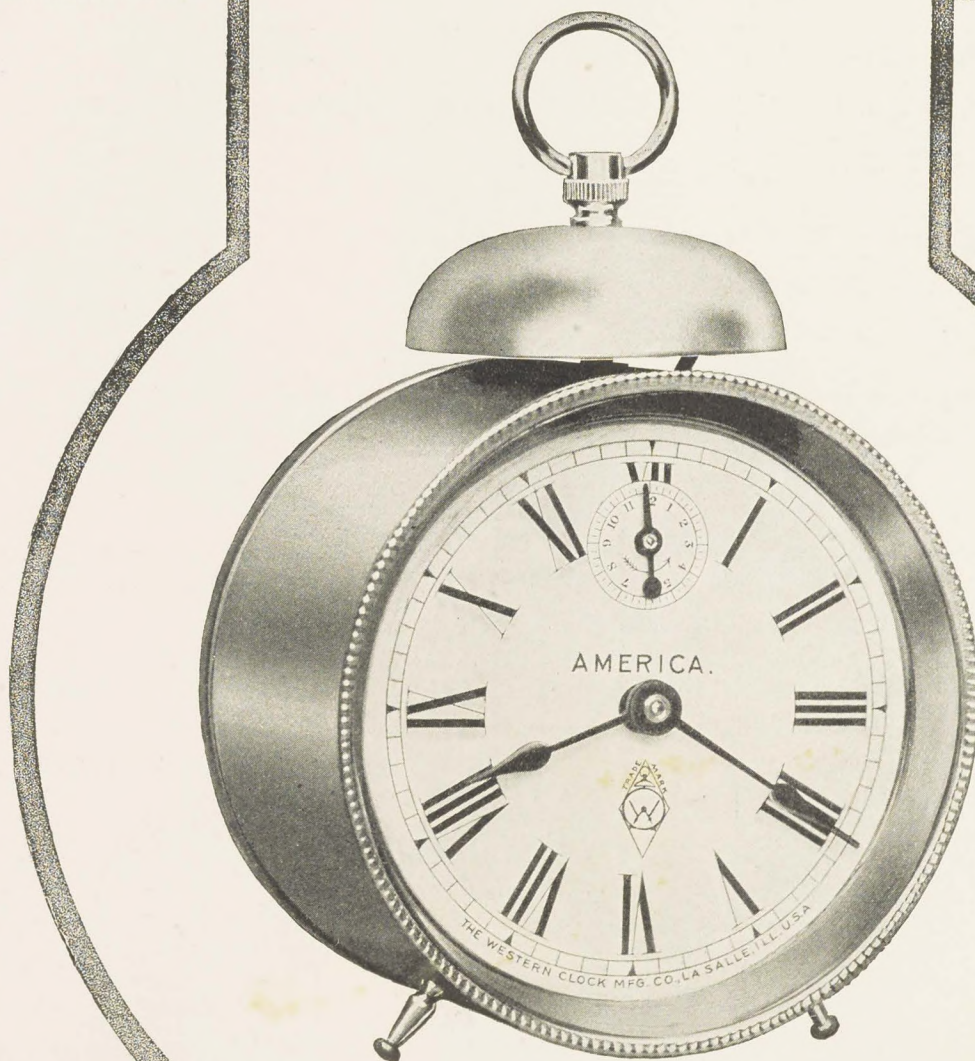
THE WESTERN CLOCK MFG. CO.

NEW YORK
51 Maiden Lane

Sole Makers of the "America" Alarm

La Salle, Ill.

CHICAGO
131 Wabash Ave.



The **AMERICA** is the outcome of twenty years' continuous success with a radically novel method of horological construction. It has to-day the largest sale of any alarm clock because it combines with a price only made possible by an enormous daily production, advantages so far found exclusively in high-priced movements, the most important being the WESTERN "Friction-Less" Hard Steel Pivots and the WESTERN Escapement.

TECHNICAL DEPARTMENT

Lessons in Horology

COURSE IN MECHANICS AS APPLIED TO CHRONOMETRY

By JULES GROSSMANN, Director of the Horological School, of Locle, Switzerland, and
HERMANN GROSSMANN, Director of the Horological and Electro-Mechanical
School, of Neuchâtel, Switzerland.

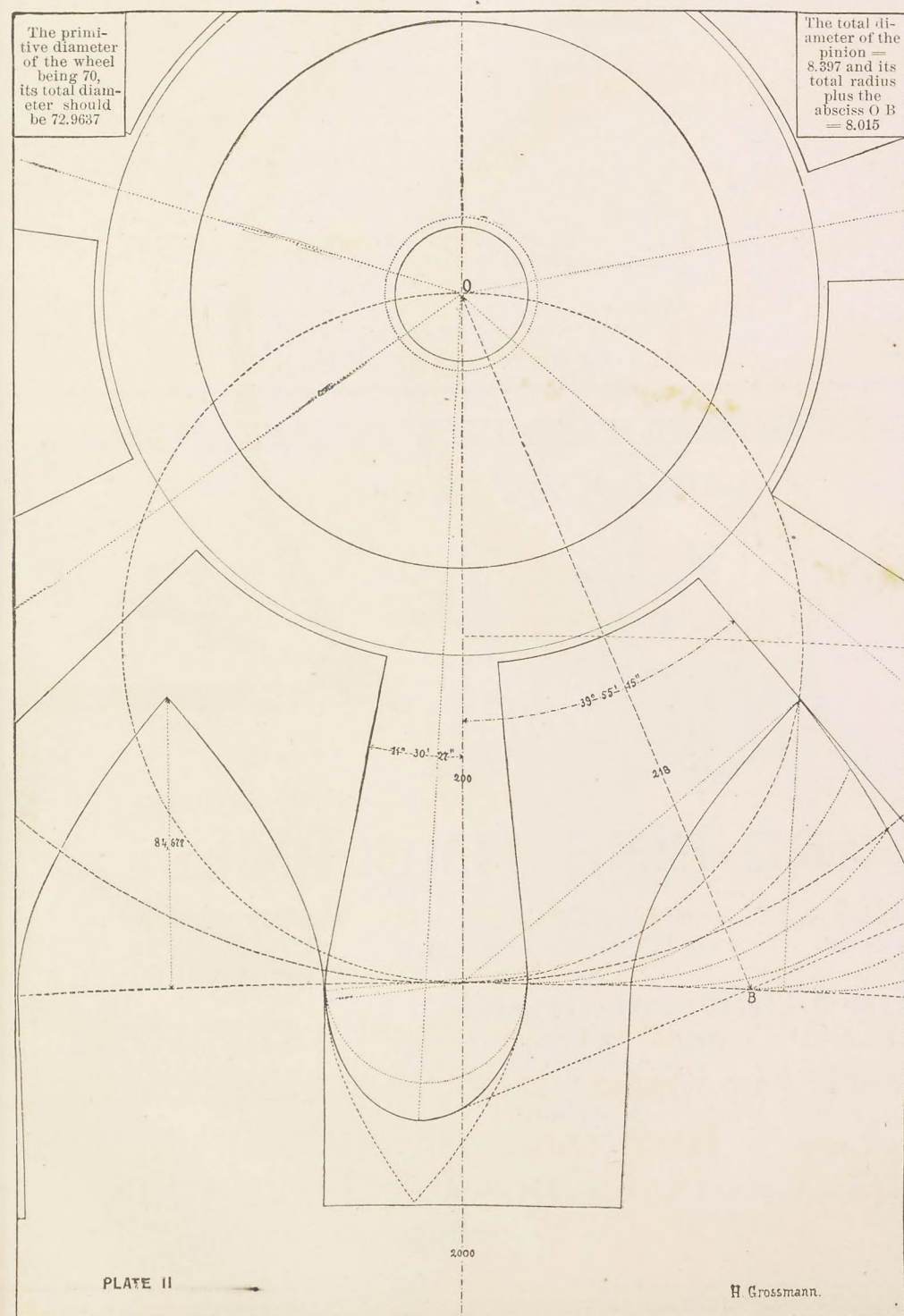
Authorized translation by JAMES ALLAN, JR., Charleston, S. C. Former pupil of the
Locle Horological School.

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(Continued. Part XXVIII.)

The leaf is afterwards terminated by an arc of an ellipse whose radius of curvature at the junction of the two curves is the same as that of the epicycloid determined.

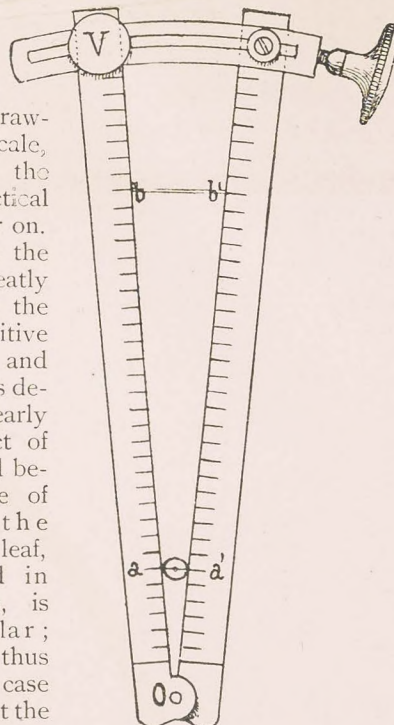
One then limits the length of the flanks of the leaves and teeth by arcs of circles with radius sufficient to allow not only the free introduction of the teeth and the leaves in the corresponding spaces, but also reserving the place which foreign bodies would occupy,



dust and other matters which are invariably introduced, with time, into the sets of teeth.

The gearing is thus constructed and having made the drawing on a sufficiently enlarged scale, one could deduce from it all the relative dimensions for its practical construction, as we will see later on.

273.* Plate II represents the same drawing to a still more greatly enlarged scale; the distance of the centers is 2200 mm., the primitive radius of the wheel 2 meters and that of the pinion 200 mm. This design allows us to show more clearly the manner in which the contact of the tooth with the leaf is effected before the line of



centers; the shape of the leaf, represented in dotted lines, is semi-circular; one sees thus that in this case the normal at the point of contact does not pass through the point of tangency of the primitive circumferences, as is the case for the semi-elliptical shape, and consequently the force transmitted has not the value which we determined (195 and the following)

$$F' = F \frac{n'}{n}$$

and that there should be produced a "butting."

274. The drawing of gears of ratchet wheels, setting wheels and dial wheels, etc., is executed in an analogous manner; we will examine later on the several modifications admitted for such wheel teeth. In this construction there must also be taken into consideration the manner in which the "play" is distributed (232, 233).

Practical Application of the Theory of Gearing.

275. In practice there are presented problems of different natures in which it is desired to determine the relative dimensions of wheels and pinions.

It is evident that, at first sight, the use of a suitable instrument to establish these sizes becomes very important to the workman, for the reason that it saves him all calculation. We will cite the one which is the most exact and at the same time the most simple to use.

276. The Proportional Compass and its Use.

The proportional compass, in its most rational arrangement, is formed of two rule plates, straight, and divided into equal parts; they are joined together at one of their extremities by means of a hinge O (Fig. 73).

These rules can be fastened in any position by means of a clamping screw V.

Their divisions should be exactly corresponding, equal to each other and numbered. The point zero is found at the hinge, summit of the angle b O b'.

The proportional compass is based on the fundamental principle of similar triangles, in which the homologous sides are proportional.

* As Plate II has, for lack of space, been reduced one-half, the distance of the centers is 1100 mm.; the primitive radius of the wheel, 1 m., and that of the pinion 100 mm.

(Continued on page 627)

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Lessons in Horology

(Continued from page 625)

Thus, imagining the primitive diameters of a wheel placed at the division of the compass corresponding to its number of teeth and the primitive diameter of the pinion at the division corresponding to its number of leaves, one should have the proportion

$$\frac{b}{a} = \frac{b'}{a'}$$

Since, in a gearing the number of teeth of the mobiles should be to each other as their radii, or their primitive diameters, one understands that to determine the primitive diameter of a pinion, knowing that of the wheel, it suffices to place the latter at the division corresponding to its number of teeth and, for this purpose, to open the two arms of the compass the proper distance. The primitive diameter of the pinion should then coincide with the division which corresponds to its number of leaves. The proportion

$$\frac{r}{r'} = \frac{n}{n'}$$

is then found to be verified.

But, as has been shown before, we run against the difficulty of not being able conveniently to fit the primitive diameters of the two mobiles in the compass, since these diameters are only theoretical.

The difficulty has been overcome in the following way:

277. On dividing the primitive diameter of any wheel by the number of its teeth, we obtain a length which we call "diametrical pitch" of the gearing. The proportional compass always gives the diametrical pitch by its division 1 when the wheel is placed so that its primitive diameter corresponds in the instrument to the division of the number of its teeth.

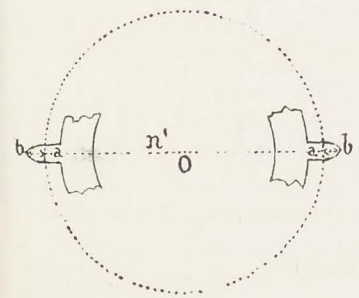


Fig. 74

This diameter is then

$$n + \frac{2ab}{d}$$

d being the pitch considered.

On now placing the total diameter of the wheel at the division

$$n + \frac{2ab}{d}$$

its primitive radius will be by this fact placed at the division n. The same for the pinion.

278. Example. Let us consider a wheel with 60 teeth gearing in a pinion with 6 leaves, and let us represent graphically this wheel with a primitive radius of 540 mm.

The diametrical pitch should be

$$\frac{2 \times 540}{60} = 18 \text{ mm.}$$

Let us describe the epicycloid of the tooth by making a generating circle with radius equal to half the primitive radius of the pinion, roll around the primitive circle of the wheel; r' being the radius of the pinion. One will have

$$\frac{1}{2} r' = \frac{6 \times 540}{60 \times 2} = 27.$$

Let us now calculate the length of the chord c, which subtends the half of the arc occupied by one tooth. We have the formula

$$c = 2r \sin \frac{1}{2} \alpha$$

and

$$\alpha = \frac{360^\circ}{4 \times 60} = 1^\circ 30'.$$

One will have, therefore,

$$c = 2 \times 540 \times \sin 0^\circ 45'$$

$$\log : 1080 = 3.0334238$$

$$\log \sin 0^\circ 45' = 8.1169262$$

$$\log : (1080 \sin 0^\circ 45') = 1.1503500$$

Consequently, one will have

$$\text{Chord of one-quarter of the pitch} = 14.1367 \text{ mm.}^*$$

Let us lay off this length of t on a (Fig. 75) and draw the radius o a prolonged to the point b belonging to the epicycloid of the tooth; o b is then the total radius of the wheel and a b the height of the ogive of the tooth.

On measuring a b, we will find it equal to 25 mm. and we will have the total radius of the wheel expressed in units of diametrical pitch, by the sum

$$60 + \frac{2 \times 25}{18} = 60 + 2.77 = 62.77.$$

One will place, therefore, the total diameter of the wheel at the division 62.77 of the compass, so that its primitive radius corresponds to the division 60.

279. One could proceed in an analogous manner for the pinion. Let us remark, however, that while the height of the ogive of the wheel is fixed, since it is formed by an epicycloid described by a point of a generating circumference with given radius, the excess of the pinion leaf is not so easily determined.

The form of the excess which one finds in a very great number of pinions is that of a semi-circumference with radius equal to half the breadth of a leaf measured on the primitive circumference. This form, although we know it to be bad, especially for pinions of low numbers, offers, however, a ready means for the calculation.

Suppose n' to be the number of leaves in the pinion.

The primitive diameter expressed in function of the diametrical pitch will be likewise n', since it is divided into as many equal parts as the pinion has leaves.

The primitive circumference is, therefore,

$$\text{circumference} = \pi n'$$

and the pitch of the gearing

$$\frac{\pi n'}{n'} = \pi.$$

If this pitch comprises a third for the full tooth and two-thirds for the space, the length of the arc corresponding to the thickness of one leaf being double the radius s of the circle of the excess, one will have

$$s = \frac{\pi}{2 \times 3}.$$

There must, therefore, be added a value equal to s to the two extremities of the primitive diameter of the pinion expressed in units of diametrical pitch:

$$\text{Total radius} = n' + \frac{\pi}{3} = n' + 1.05.$$

Thus, for the pinions whose full part of the pitch is equal to half of the space and whose excess has the form of a semi-circle, the total diameter should be stopped at the division corresponding to the number of leaves increased by 1.05.

For the gearing which we will consider, of a wheel with 60 teeth and a pinion of 6 leaves, one should place the wheel at the division 62.77 and the pinion at the division 7.05.

280. Let us again make the calculation for a pinion in which the leaf is two-fifths of the pitch (12 leaves and above).

As in the preceding case, the pitch of the gearing is equal to π and the radius of the ogive

$$s = \frac{\pi}{5};$$

as 2 s must be added to the primitive diameter, we will have

$$2s = \frac{2\pi}{5} = 1.25.$$

The total diameter expressed in units of diametrical pitch is, therefore,

$$n' + 1.25.$$

*One could have obtained this result without the aid of trigonometry, by noting that the arcs and chords of small angles differ very little from each other. One would thus have

$$\frac{2\pi r}{4 \times 60} = 4.5 \times 3.1416 = 14.1372,$$

a very close approximation.

[TO BE CONTINUED]

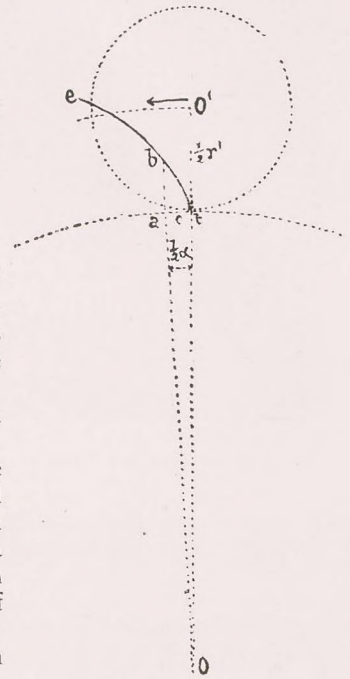
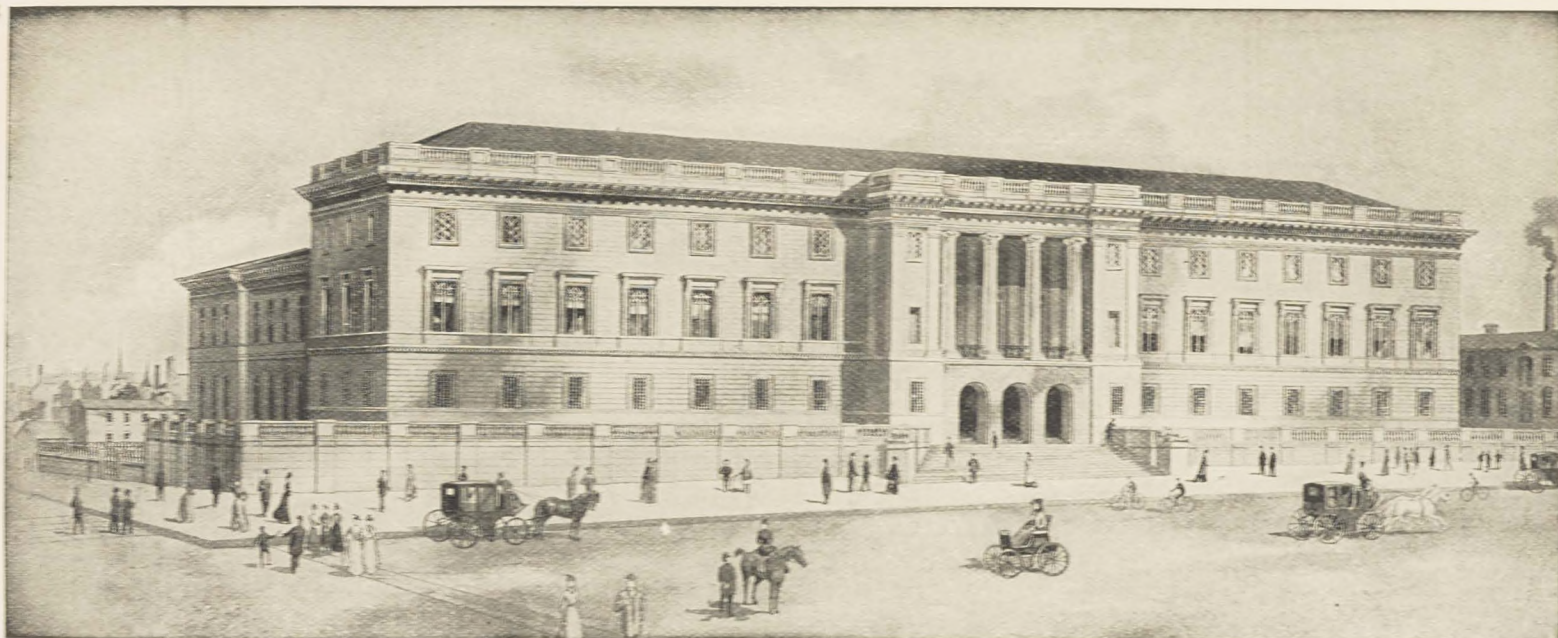


Fig. 75



U. S. Mint, Philadelphia

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at its mints and assay offices, large consignments of old gold, refines same and remits proceeds by express.

About 6 to 8 days' time is required to get returns from which refining and coinage charges are deducted and return expressage to pay.

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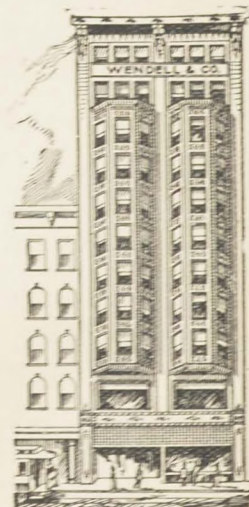
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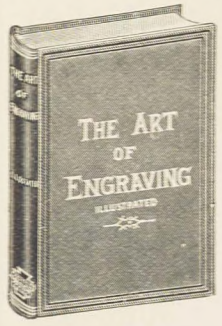
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(Continued. Part XXXVIII. Begun in March, 1903)

The style of old English illustrated at Fig. 169 in our preceding issue can be shaded by bright cutting, or by cutting the shade strokes by making several fine lines very close together to take the place of the one bright-cut stroke. The lines filling in between the shade stroke and the hair lines should be cut horizontally, as in illustrations given.

This style and this angle are those mostly used, and the engraver should follow them in all of his practice, excepting in cases in which we commended the use of the style shown at Figs. 157 or 158. If it is necessary to put a long word in a short space, and this style of old English is to be used, the proportion of the letters could be slightly changed, the letters being made narrower or drawn out and made fuller, as shown at Fig. 157. These changes can be made as the case may require, but in making them great skill is necessary, and the student is cautioned to be very careful and accurate in making any change from the regular form of letter.

German Text Alphabet

At Fig. 170 we illustrate the German text alphabet shaded. It has been previously stated that the old English alphabet was probably an outgrowth of the German text. We are, therefore, inclined to believe that the German text is the one, if not the original ornamental alphabet. This is without doubt true in reference to the class of ornamental letters used by engravers. German text



Fig. 170

letters are not used as often as old English, due no doubt to the fact that they are so extremely ornamental and so radically different from the plain foundation of our block letters or any of the plainer styles. These letters are difficult to design and somewhat difficult to cut. They are mostly composed of scrolls and crescent cuts in their general form, there being no straight bars in the capitals, and the absence of the latter proves that the letters are difficult to cut, as well as design. The irregular shape of the letter is such that it would be quite difficult to arrange a mechanical drawing, around which or in which the letters could be designed with any degree of accuracy. In fact, German text is a style of letter that should be designed free-hand, and from an artistic standpoint, not mechanical. The method of shading German text

is the same as has been described for shading old English. The filling in between letters is also the same. However, in the regular shaded German text the plain angle hair line, as shown at Fig. 150, is used and preferred, but any of the fancy fillings could be used. Usually this alphabet has little cuts along the outside of the bar from the shaded stroke, which are made with a flat-face graver; or a square tool could be used, making what is known as little scallops or chop cuts, previously described. The German text can also be cut bright cut or fine line, the method being the same as has been illustrated and described for old English.

It is the custom of some engravers to use German text capitals and old English lower-case letters in combination. The use of German text can be applied in any case where old English could be used, as the letters are so similar. Many engravers think it unnecessary to learn to sketch these letters accurately, as they think old English will take the place of the German text in all cases. It is true that old English is the most popular, yet there are many people who will insist on having the German-text style, and one who is skilled with the graver and pencil in old English work, would find little difficulty in designing and engraving German text letters. It is not practical to engrave these letters on an angle tilting backward or forward. They should be engraved perfectly vertical.

Engraving Script Inscriptions

Of all the different classes of work with which the engraver has to deal, that of engraving an inscription on a watch cap is, without doubt, the most difficult. This is due to the fact that the letters and words must be given prominence according to the significance of the word from the standpoint of the meaning of the inscription, or from a grammatical standpoint.

It is sometimes necessary to vary from the rules of grammar in reference to the prominence of different words, but more often the grammatical accuracy of the inscription can be carried out and due prominence given to the various lines according to the value of the word or words as used by the person ordering the inscription engraved. It is difficult to engrave an inscription on a polished watch case and make all the letters on exactly the same angle and all the lines exactly the same size and width of stroke, but this must be done in a script inscription.

In engraving an inscription in plain script the student must bear in mind the facts above mentioned in reference to inscription work. When the inscription is written out by the customer it should be rewritten by the engraver, he putting certain words on the lines as they would best fit and balance in the circle, and at the same time be grammatically accurate. One may be very skillful with the graver and yet be unable to cut an inscription and do the work with the accuracy necessary to produce a finished inscription. After the inscription has been rewritten and arranged with the words on the lines, as it is proposed to engrave it, allowing for the principal name or names to be engraved in a trifle larger letter, the next step is to find the center of the inscription. By this is meant that if there be eight lines or seven lines, the second line being larger than any of the others, being the principal name of the party or parties mentioned in the inscription, the first four lines would occupy more space than the four lines to follow, and such allowance for space must be given in spacing the inscription on a piece of paper. By spacing is meant drawing a circle with a compass and then a horizontal and vertical line through the same. Then write the inscription in this space, enlarging the name or names to the extent called for, and thus giving them more space than is allotted to smaller lines. When such words as "of the," "by the," "is," "and," "of," "for," or any prepositions, conjunctions or connecting words occur, they should be engraved in smaller letters, and in spacing a much smaller line should be allowed for such words than for the principal words or names.

After the inscription has been written into the circle, as above described (and said circle can be as large as desired, the object of writing the inscription in the circle being to see how the inscription would appear from a grammatical standpoint), the engraver can form an idea of how it will appear when finished. He can also find the center of the words and whether or not the center of the cap will come through the center of the third line or, if there will be eight lines, between the fourth and fifth. This knowledge is obtained by writing the inscription in this manner, making the lines that should be large larger, and those that should be small smaller. Those that are to be all the same should be written accordingly.

(TO BE CONTINUED)



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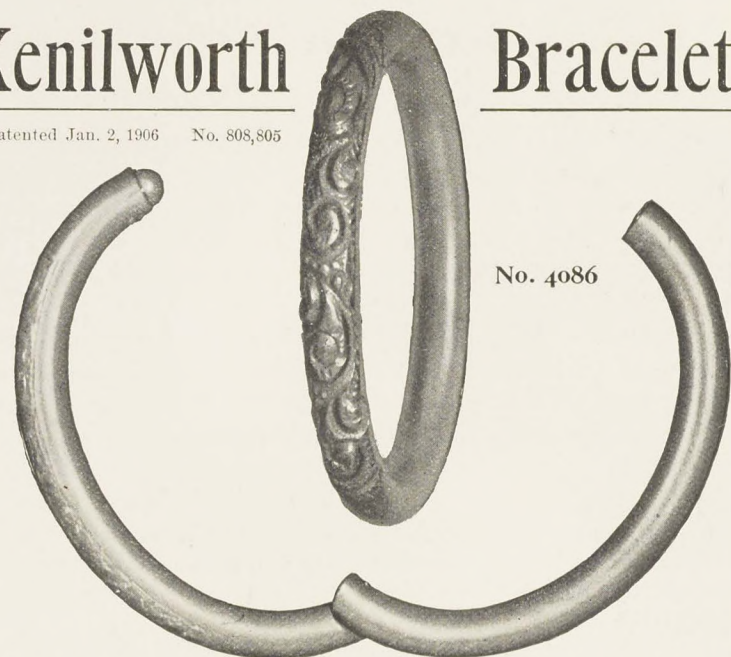
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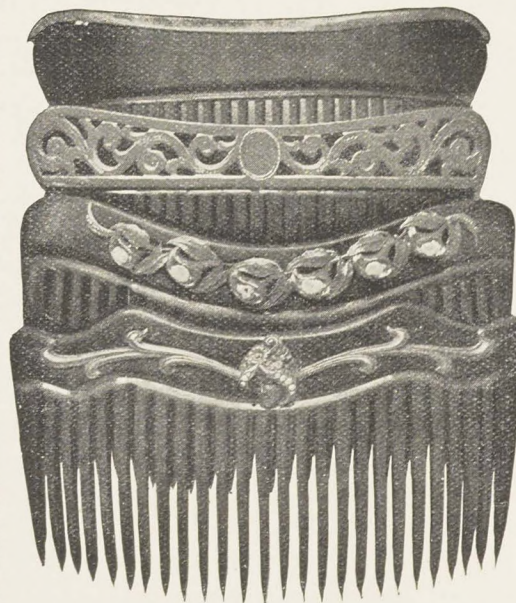
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Electricity for Jewelers

(Continued. Part VII)

Our series of articles closes with the measurement of *electromotive force* and of *resistance*. Both can be measured with a galvanometer, by suitably varying its construction for the purpose in view, and the calibration or method of dividing the scale upon which the readings are taken. The fundamental principle upon which the instrument operates is the same as described last month for the measurement of current strength, viz.: the deflection of a magnetic needle by the current to be measured—even when a resistance is said to be measured, it is really the current which we measure, after it is passed through the resistance and is weakened thereby. But there are many practical points which are required to be known before the operation can be fully understood.

Electromotive force is the electric force generated by the battery, and is expressed in volts. It is equivalent to the *difference of potential* between any two points, whether they be two points in the circuit or conductor, or the two poles of the battery (or other generator) itself. We have explained the meaning of difference of potential in a previous article. That difference can only be maintained between two points by having a certain resistance between them. Supposing the current which flows through the circuit to be 1 ampere, there must be 1 ohm of resistance between those points for each volt of electromotive force or of difference of potential between them, and as long as we maintain one volt difference of potential, the current between them will have one volt of electromotive force. If we lower the resistance between them, we also lower the difference of potential. If we connect them by a thick wire which has practically no resistance, there will be practically no difference of potential between them.

Our measurements should therefore be made in such a way that the process will not change the strength or volume of current flowing, or will change it as little as possible. In order to measure the difference of potential between two points, we have to insert our galvanometer between them. This, of course, gives the current a path between those points in addition to the one through which it was previously flowing, and as two conductors between them have less resistance than one, our galvanometer will, of course, lower the resistance between those points. In order to lower it as little as possible, the resistance of the galvanometer should be high, *i. e.*, its coils should consist of many turns of fine wire, when used for measuring electromotive force or difference of potential.

Measurement of Electromotive Force

This method is shown in Fig. 16, where we want to measure the difference of potential points *a* and *b* in the circuit. We insert our galvanometer *G* between those points, and observe the deflection of its needle. As its resistance is (or should be) much greater than that of *V*, it will receive but a small share of the current flowing between *a* and *b*, and the scale upon its dial must be calibrated specially for such currents. Suppose that we have some electrical apparatus, *V*, working between *a* and *b*, and we want to know the current it is using. To find the *volume* current, in amperes, we connect our low resistance galvanometer, or ammeter, directly in the circuit, as shown in Fig. 15. But to find its *electromotive force*, in volts, or the difference of potential between two points, we connect the galvanometer in a shunt

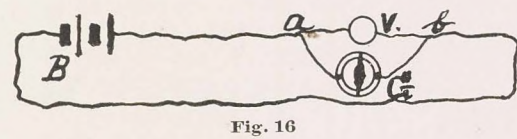


Fig. 16

or branch circuit between those points, as shown in Fig. 16.

To save time, we can measure both the amperes and the volts at once, by having two galvanometers, and inserting the ammeter directly in the main circuit and the voltmeter in the branch circuit, then simultaneously measuring the amperes on the former and the volts on the latter. To find the power of the current, we multiply the number of amperes flowing by the number of volts of electromotive force, which gives us the number of watts of electric power being expended between *a* and *b*, and that amount being multiplied by the *time* this power is furnished, gives us the amount of work done by the current, as explained in a previous article. There are instruments so constructed as to give the number of watts by direct reading from the scale, with one measurement—the main and branch circuits being arranged in the instrument itself. They are called wattmeters, but are not very largely used, and are not necessary for the purposes of the jeweler, who is more interested in knowing the volume and the pressure of his current.

Voltmeters

The electromotive force of a current is usually measured by comparison with the electromotive force of some standard cell of battery, generally the Daniels cell, which gives an electromotive force of 1 volt. When the measured electromotive force is twice that of a standard Daniels cell, it is said to be two volts, and so on. When the instrument is so constructed that its pointer indicates the number of volts by direct reading from the scale, it is called a voltmeter. In the case of an ammeter, the number of amperes flowing

through the instrument and producing any particular deflection is shown on the scale, but in a voltmeter the scale shows the number of volts (or difference of potential) that must be maintained between the terminals of the instrument to produce that number of amperes of current.

The style of galvanometer shown in Article VI has several serious faults, among them the following: If the instrument is placed too near a powerful magnet, as a dynamo or an electric motor, not only is the suspended magnetic needle affected by the external magnetism near it, without regard to the current flowing through its coils, but the needle may even have its magnetism removed or reversed in polarity by the powerful external magnet—and the user perhaps may know nothing of any such change having occurred, although it may render his instrument unreliable or worthless for all measuring purposes.

The reason for this will be plain, when it is remembered that the operation of the instrument depends upon the deflection of a magnetized needle, which is caused to normally point north and south by the earth's magnetism acting on the needle. Now, if there is some other external magnetism near, which is perhaps more powerful than the earth's magnetism, it will control the needle instead of the latter, and the indications of the instrument will be worthless. Again, the scale is divided off to show a certain deflection of the needle for a certain strength of current. But if the needle itself has the strength of its magnetism changed, it is evident that a certain current will not give the same deflection as before, and the instrument is not reliable.

Instruments are therefore constructed to operate without depending on the action of the earth's magnetism upon a magnetized needle; some operate by the pull of a spring, some by gravity, some by the action of a suspended coil (in place of the needle), whose magnetism is produced by the current being measured and is therefore proportional to it—and others. These are for special cases, where an instrument with a magnetized needle would be unreliable. But the latter is still generally used, being a very convenient and reliable apparatus, wherever its use is practicable.

All direct reading voltmeters are not based on the deflection of a magnetized needle. One which is largely used, Cardew's voltmeter, operates by the expansion of a wire produced by the heating effect of the current flowing through it. A very long and fine wire is used, one end being fixed, the other attached to a train of wheel work, by which the expansion of the wire is magnified, and upon the last arbor of the train is a pointer which moves over the scale. What is actually shown on the scale is, of course, the magnified expansion of the wire when a current is flowing through it. But by properly dividing the scale, the different divisions show the current strength required to produce that amount of heat in the wire, and in effect show the electromotive force (or difference of potential) required to send that current through a wire having the resistance of that particular wire.

Cardew's Voltmeter

[TO BE CONTINUED]



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Buffalo

How to Clean an American Watch

THE following article is notable for three things: First, its excellence; second, its authorship, being written by a British watch repairer, and, third, as showing that a knowledge of the American watch is now a universal essential.

All delicate pieces of mechanism require cleaning and repairing periodically, so that they may run smoothly and this is particularly the case with a watch, which we might almost say, is the most delicate piece of machinery in common everyday use. In this article I shall put before you one or two of the methods employed in the cleaning of a watch, as the different methods are almost as numerous and varied as the styles of watches themselves. I propose to divide this article into three sections, viz.:

- 1st. The taking down of the watch.
- 2d. The cleaning of the watch.
- 3d. The putting together of the watch.

The Taking Down of the Watch

One of the things which is essential in a watch-maker is care, and this is particularly needed in taking a watch apart. If care is not used here, many a thing will be passed over only to be seen when the watch is perhaps put together and almost finished, necessitating its coming apart again and the repairing of the part passed over in taking down.

Before taking the movement out of the case, one should see that the center arbor or cannon pinion does not touch the glass. In some cases the glass will be marked by the center arbor scraping it; if this is seen a slightly higher glass can be put in which will leave a clear space between the one and the other. The movement should then be examined to see that it does not shake about in the case and that the case screws are all right and not overhauled.

The movement can then be removed from the case and the case put aside for the present. The movement should then be examined carefully, and the position of the regulator noted so as to save time in regulating when finished. The hairspring should be examined to see that it is working freely and has not been tampered with, and the balance to see that it is running true in the flat. The balance cock with the balance can then be removed and put into the tray, while the screw can be put into its proper place in the screwholder on the bench. The hands can then be examined before removal to see that the hour hand has not too much shake. If this is found, a dial-washer can be put on when putting together.

The hands, dial, hour wheel, minute wheel and cannon pinion can then be removed and placed in the tray. If the mainspring has not been let down it may be done now. In a keyless watch, if the button and stem do not come out by the extraction of a screw in the pendant, the end of a file squared up may be inserted in the winding wheel and by easing the click, which can be done by the finger in some watches, and in others by the insertion of a heckle-tooth into a hole in the edge of the plate, the spring can be let down easily and carefully. The bar can then be removed, care being taken to see that none of the screws are overhauled.

The plate screws can then be removed and the plate eased up and the pallets removed, as if this

is not done and the plate simply lifted off, there is great danger of one of the pallet staff pivots being broken off. The plate can then be lifted off and the wheels lifted out and put in the tray. The first part of the process has now been completed, and the watch is ready for cleaning.

The Cleaning of the Watch

If the watch is very dirty, it should be given a rough brush over and all the wheels and pinions examined to see that the pivots are not rough or worn and that none of the teeth are bent in any of the wheels. The pallet stones should then be examined to see that they are tight and not chipped in any way. The train may then be put in and tried for the endshakes and depths. When examining the depths, the center wheel and third wheel should be put together and tried round carefully, then the third and fourth wheel and so on. When this has been done, the whole train may be put in and tried to see that it runs freely. The barrel may now be taken to pieces and if the mainspring looks sticky and gummy it may also be removed, but not otherwise. The balance and hairspring can now be removed from the balance cock; as a rule this is held by a screw in the side of the cock, which pinches the hairspring stud.

The cock and foot jewel can now be taken apart. In the case of a keyless watch, the keyless work must all be taken to pieces. We will take it that everything has been found in proper repair, and that cleaning is all that is required. It is here that different workmen adopt their different methods, some cleaning by the old method of brush and chalk, using only benzine for the balance and hairspring. This method is so old and well-known that it is not necessary here to enter into details, suffice it to say that each piece is brushed separately and in the case of the train wheels, the pinions pegged out. The pivot holes in the plates are also pegged out carefully until the peg comes out clean. Each piece is put under the shade when cleaned, ready for putting together.

Another well-known and much-practiced method is as follows: When the watch has been taken apart, all the pieces, with the exception of the pallets as some think that the benzine tends to slacken the stones, are put into a glass dish containing gasoline (or benzine) some even at this point putting in the jewels also, but personally, I prefer to clean them afterwards. Before its removal from the benzine dish, each piece is daubed with a small camel hair brush to wash off any oil or grit before being put into the boxwood sawdust to dry.

In removing the parts from the sawdust, they should be brushed with a perfectly clean, soft brush to remove any sawdust which might adhere in the recesses of the plates or between the teeth of the wheels. The plates should then be pegged out carefully as stated in the first process, and after being cleaned each piece is put under the shade ready for putting together.

Another method is the cyanide process, which is gone about in the following manner: The benzine process just described is followed in detail until the removal of the pieces from the sawdust, and here comes in the difference. When the wheels, plates and bars have been taken from the sawdust, they are strung on a piece of thin brass wire and dipped into a solution of cyanide of potassium.

The strength of this solution is a matter of controversy, some say an ounce of cyanide to a quart of water, while others hold that this is too strong a solution. Of course, according to the strength of the solution, the length of time for

the immersion can be regulated. After being dipped, the pieces are washed in soap and warm water, rinsed off in clean water and then dipped in alcohol, then put once more into the sawdust. As already described, the pieces are all brushed carefully on removal from the sawdust and the pivot holes in the plates pegged out, each piece after cleaning being put under the shade.

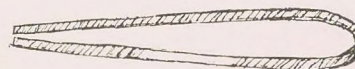
This point having been reached by any of the three methods just described we will proceed—what follows is applicable to them all. The mainspring can now be oiled with clock oil and after pegging out the barrel bushes, the arbor may be put in and the barrel lid snapped on. The barrel arbor must have a little endshake in the barrel and must be carefully oiled with clock oil. At this point I now clean out the balance cock and foot jewels and jewel covers (cap jewels) and place them in position.

Putting the Watch Together

We now come to the last part of the process, namely the putting of the watch together.

In a keyless watch, it is advisable at this point to put together the keyless work regardless of which side of the plate it may be on. If it is one with the rocking bar, the underside of the bar should be greased with clock oil, all the winding wheels and all working parts of the keyless work being also greased, before being screwed into their places.

The train wheels can now be placed in position in the bottom plate, and the top plate laid on carefully. The pallets can now be taken up in the tweezers and slipped into their place. In the case of a straight-line escapement where the pallets are in behind the escape wheel, some difficulty is experienced in getting them into position. The difficulty may be got over in the following way: A piece of watch mainspring about two inches in length is softened in the center and bent over double, in this fashion:



The pallets are now put in position in the top plate, and one end of this spring brought over them. This holds them in position and the plate can be turned over without any danger of their falling out. The top plate can then be put on and the pivots guided into their places, starting from the center wheel and working up to the pallets.

The plate screws may now be put in and screwed down tightly. A little back pressure now applied to the center wheel will cause the watch to trip, and if it does not do so, everything is not as free as it should be. The barrel may now be put in and the bar screwed down. The center wheel pivot can now be oiled and the cannon pinion put on, care being taken to see that it is tight enough to carry the hands. American watches in this respect gives less trouble than English ones, as the cannon pinion is lighter than the latter, and consequently has more spring in it, and as a rule needs nothing done to make the hands tight enough.

The bottom plate should now be oiled carefully so as to spill none outside the countersinks. The minute and hour wheels can then be put on and the minute wheel left quite dry. I often find that the minute wheel has been oiled on the under side, presumably to make it slide easier, as long as it is quite free on the pin in the plate that is all that is required. The dial may now be put on and the screws in the side of the plate screwed up tightly, so that the dial does not shake about.

(Continued on page 635)

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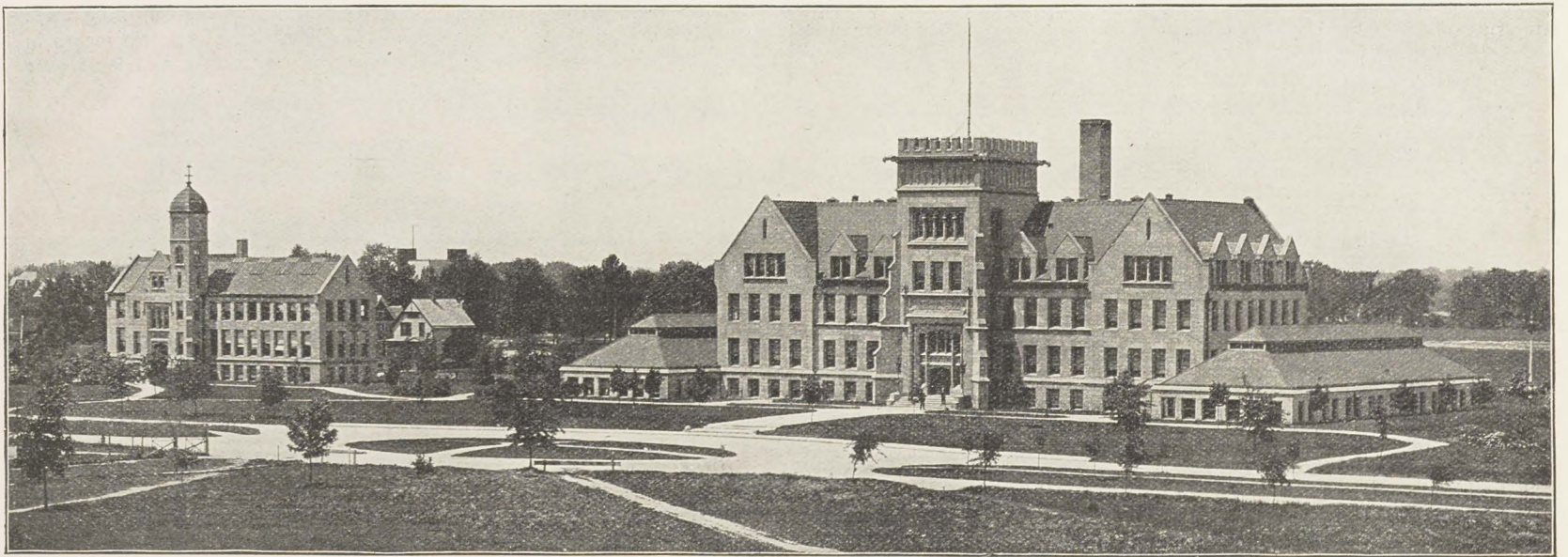
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How to Clean an American Watch

(Continued from page 633)

The hands are now put on, the hour hand being put on at one o'clock, as it can be set more accurately at this hour. The hands should be tried round to see that they are quite free from each other. I now oil the top plate, starting with the center wheel hole and coming in order to the pallets, so that none are passed over. The points of one or two of the escape wheel teeth are touched with the oiler, there is as a rule sufficient on the oiler after oiling a hole to do this.

The dust ring may now be put on and the watch put under the shade. The balance cock jewel should now be oiled and the point of a peg put through so as to pass the oil through to the jewel cover, some workmen put a little oil on the jewel cover before it is put in position. The balance should now be screwed to the balance cock, and the hairspring left so that if the balance is set oscillating, the outside coil moves freely between the curb pins, all the way round from fast to slow.

The foot jewel may now be oiled in the same way as the cock jewel and the inside of the fork greased where the ruby pin rubs in carrying it across. If this is not done, in some watches after going for some time a very light deposit of rust, almost like rouge, will be found on the fork. It is a safe rule that where two acting surfaces meet in this way, they should be greased.

The balance can now be put in position; if it is in beat, it will usually start off of its own accord, and the cock screw screwed home tightly. While this screw is being screwed home, great care should be taken not to pinch the top pivot in any way, if the balance is oscillating as it should be, it will stop as soon as any pressure comes on the pivot. The balance should now be tried for end-shake. The regulator can now be left in the position in which it was found, and the watch set to the time, taken from the clock by which all the watches are regulated.

The movement is now completed, and can be put under the shade until the case is cleaned. The case can then be cleaned by using a mixture of ammonia, alcohol and chalk applied with a brush. To remove dirt from around joints and under bezels, a chisel-pointed peg dipped in the chalk may be used, and this will be found sufficient to take out any black spots. The case should be well cleaned and no dirt left about it, under case springs, etc.

After a watch movement has been well cleaned, it is senseless to put it into a half-cleaned case, as a small piece of grit may be shaken out of the case at any time and stop the watch. The case having been well cleaned, the movement may now be put in, the case screws screwed up to hold it in tightly and the screw in the pendant screwed home to hold in the button and stem. After closing the case, the hands should be turned round to see that they do not touch the glass at any point.

The watch has now been cleaned and everything having been gone through carefully, it should with careful handling need no further attention for at least a year. In cleaning a watch, as much depends on the man as on the methods employed, the chief aim being to leave a well-cleaned, bright-looking watch.

This essay covers the subject very fully, and on the whole very correctly, though

there are a few points which call for brief comment. It is stated that some workmen do not put the pallets in the preliminary bath of benzine, for fear of having the stones loosened in their seats. On this point we can assure the workman that there is positively no danger, and he need not inconvenience himself by excepting the pallets from the benzine bath; the stones are held in place by shellac, on which benzine has no dissolvent effect.

Of the three methods of cleaning described, the consensus of opinion among American watchmakers is that the cyanide-of-potassium method is best. We can suggest two minor points on which the method described may be improved, not in efficacy, but in a saving of the time required in the operation. In the first place, it is not necessary to dry the parts in sawdust after the benzine bath; what benzine adheres to the parts on removal from the bath will quickly evaporate, if the proper quality be used, a quality refined to a point at which it is free from the oil, which is responsible for too slow evaporation. It is well, therefore, to test benzine before buying, by dipping into it a piece of metal and observing the rate of evaporation of what adheres to the metal upon withdrawal.

Secondly, it is not *essential* that warm water be used for the washing of the parts with soap. If there is a convenient source, such as a hot-water hydrant, it is very well; but in preference to wasting time and making trouble heating water in a vessel, we would recommend washing in cold water, as the results will be just as good if the soap is thoroughly rinsed off. In an operation so frequently repeated as cleaning, the workman should study to cut down every minute not essential to thoroughness of work.

After the soap bath and clear water rinse, the parts are held for a moment in alcohol. The action of the alcohol is, that the water clinging to the watch parts, being heavier than the alcohol in which they are immersed, drops to the bottom of the vessel, and the alcohol which takes its place is quickly absorbed and evaporated by the help of the fine sawdust into which the pieces are next placed.

It may be mentioned here, that for use in cleaning watches, wood alcohol fulfills all requirements, and costs very much less than grain alcohol; it should not be used in the spirit-lamp, as its *flame* rusts steel. Since alcohol dissolves shellac, the pallets and the balance should be quickly dipped, removed and dried; if done without undue delay, there will be no danger of loosening the pallet stones or roller jewel. In most cases, though, the benzine bath is all that the pallets require.

After using an alcohol-bath for some time, the water should be removed by drawing off the greater part of the contents of the vessel and throwing out what remains in the bottom, which will be mostly water.

Watches properly cleaned by the cyanide process have a clear, bright, *new* appearance, which it takes considerably *more labor* to equal by any other process.

A question which causes a good deal of controversy is whether or not the slot of the fork should be oiled. While there is a good deal to be said in favor of oiling the slot, we are inclined rather to the negative side, as it seems the fork-slot is in a position eminently susceptible to dust and dirt, and the fork and roller construction being such as not to retain oil on the acting surfaces, soon the only effect of the thin film which remains is to collect and retain dirt and dust, which is more of a detriment to the action than would be the absence of oil.

One point not touched on in the above essay, but which some repairers resort to in practice, is the removal of the mainspring, replacing barrel arbor and cover, and trying the barrel shakes and truth in the frame of the watch. This is a very important matter to look after in examining a watch which appears to have been in use quite a long time.

Another thing which may be profitably remembered is that the jewel settings can be polished nicely with a piece of pegwood, having a scrap of chamois glued to its end, with a little rouge on it; when rubbed in the setting it polishes it splendidly. The balance wheel and screws may be rubbed with a small chamois buff. It certainly adds greatly to the fine appearance of a job to have the cups of the jewel settings, and the balance-wheel, polished as suggested, and it should be done wherever the original polished surfaces have become dull.

A habit which many workmen do not follow, but which we think well of as an assurance of no trouble after the watch is put together, is the custom of partly winding up the mainspring with sliding tongs, before putting the barrel into the watch, thus making sure that the fastenings are all sound and properly caught.

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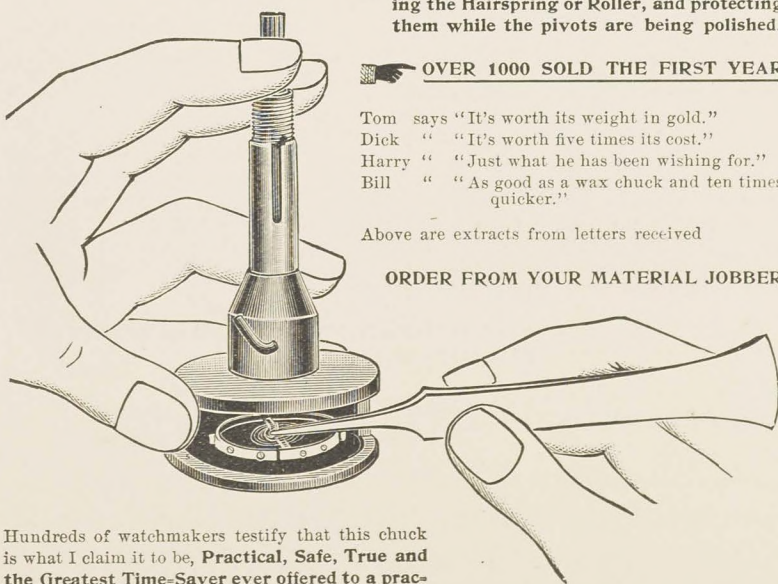
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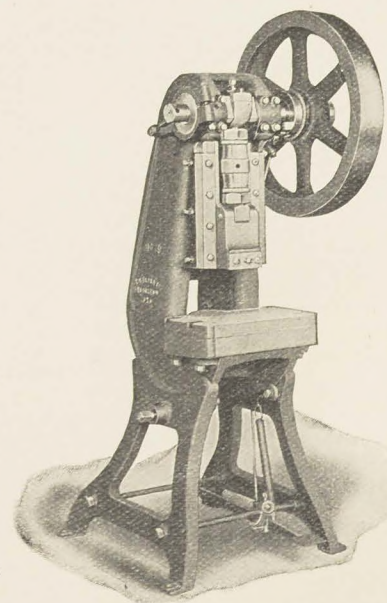
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Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. No attention will be paid to anonymous communications. Questions will be answered in the order in which they are received.

An INDEX to the questions answered in Workshop Notes department for each year accompanies each December number. Subscribers are requested to preserve these indexes, and, before mailing questions, to refer to them, as similar questions may have been answered in previous issues. These indexes are arranged alphabetically, according to subject covered in each answer, and tell the issue and page on which the information may be found.

"Timer."—A short time ago I received a 15-jewel, o-size Elgin. This movement had run two or three years and always kept good time, then it got to stopping, and then suddenly quit that and got to running two or three hours a day fast. After movement got running fast, partly brought it in for repairs. I examined it, cleaned and oiled it; no jewels were broke, nor pivots bent, nor wheels out of true; guard pin O. K.—everything seemed to be in first-class condition. But after I got it together it still gained. I examined it for magnetism, but found none. I put in a weaker hairspring, and since then it has given entire satisfaction. What I would like to know is how a watch could be all right at one time for a year or two and then suddenly run wild without any apparent cause.—We think the whole trouble was with the balance becoming lighter by one or a pair of screws becoming loose and dropping out. Did you try the balance for poise, and did you see whether the same number of screws were on both sides of the balance? It would be well if you could get this watch and look it over again and see whether any of the screws in the balance have been lost out. This is the only thing that we know of that would cause the watch to act as it did.

"Hamp."—(1) I have an o-size Hampden watch, 7 jewel, that was brought in for cleaning. I cleaned it in the usual way and with much care, but it has not gone right; it loses 20 minutes in 24 hours. I have looked for crooked jewels and have tried the balance and fork for binding, but to no effect. I have lightened balance (which is in poise). Where can the trouble be?—A great many workmen make a mistake of changing the hairspring or changing the weight of the balance wheel when the watch varies as much as this one. It stands to reason that the chances are the watch kept fair time before it was brought to you for repairs, and as you did not do any repairing to the balance or hairspring, these parts are the last things we should alter or change. You made a mistake by lightening your balance, for we believe the fault lies in the balance taking a sluggish action by a pivot being bent, pivots being rough, hairspring out of flat, rubbing on balance or balance bridge. Strip your balance of the hairspring and roller table, place it in the watch and make it spin round; listen if it strikes anywhere (in all positions), and see if it comes to a sudden stop in any position. If everything about these parts is in good shape, look at the cannon pinion, it may be loose, which would cause the watch to lose time; also see that your hour wheel does not bind on the cannon pinion, and after you have put the hands on see that the hour hand is free and has a little play. An examination as explained above should locate the trouble.

(2) What is the proper way to find a new roller jewel; and is there any cement better than hard shellac? What tools are the best to use?—To pick out a roller jewel for a watch we want one that will fit the slot in the fork as snugly as possible without binding. Shellac is generally used to fasten roller jewels, although there is a cement on the market for this purpose called Liquid Amber that is very good. There are any number of roller-jewel setters on the market, any one of which will do the work if handled properly; all that is required is to have the roller jewel to stand perpendicular. A great many workmen have trouble with the roller jewel not staying tight; this is caused by not cleaning the table and remov-

ing the oil and old shellac before fastening the jewel in place.

(3) Why cannot a round roller jewel be used in an American watch?—In most of the watches that are made to-day (except the old-style American) the roller table contains a hole for the roller jewel the same shape as the jewel should be; therefore, you cannot put in a round jewel. The round jewel is the most defective jewel that was ever used in watches. For example, take the American watch that is made to-day and has the pallet and roller action in proper condition: if you should take out the original roller jewel and replace it with a round one, you would have to open the banking pins to allow the jewel to pass out of the

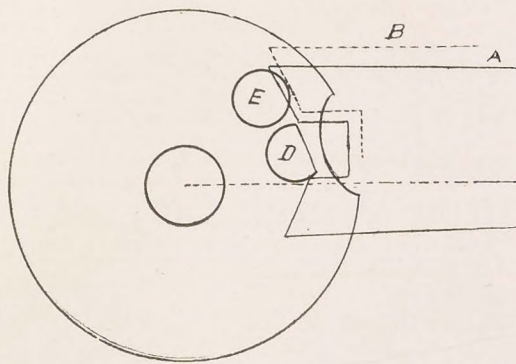


Fig. 1

slot in the fork. See Fig. 1, where A represents a fork banked properly for a two-fifth cut-away pin, and where B represents a fork banked so as to allow a round jewel pin to leave the slot and clear the horn of the fork. You can see from this how much farther a fork must move when using a round jewel pin; therefore, giving the watch too much lock, and this lock could not be reduced by pushing in the pallet stones, for if we did, we would not have a secure pallet action. Round roller jewels are a thing of the past, except in some of the old English lever watches.

(4) What is the best way to put in a barrel hook? I do not like to put in a brass hook and tap the hole and cut threads on hook (steel wire), but I do not have good luck making the hook. How should the hook be made and how large should it be?—The hole in the mainspring should not be any larger than half the width of the spring. A brass hook is what you want to use in the average watch. Drill a hole in the barrel, then tap it and be sure your tap leaves a good thread; then take a piece of brass wire, turn it with a slight taper and cut a thread on it, so that it will screw into the barrel and become tight. The end of that which sticks too far into the barrel should be cut off until only there remains enough to make a hook about the thickness of the mainspring. Now, with a screw-head file, mark on which side the hook should be, then unscrew the wire and proceed to shape the hook by using the screw-head file and shaping it something like that shown in Fig. 2; then replace it in the barrel in its proper position, cutting off and finishing up the outside. There is no occasion to use soft solder with a hook of this

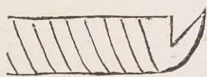


Fig. 2

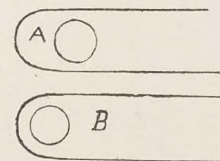


Fig. 3

kind, if we get our brass wire to screw into the barrel tightly. For another style of hook, see answer to "French Clock," page 149, February, 1901, KEYSTONE. A great many mainsprings slip and become unhooked, which is not caused by the hook in the barrel but by that part

of the spring from the hole to the end being too long. See Fig. 3, where A represents the wrong way and B the proper way.

(5) Which do you think is the best watch or clock oil to use? I have two kinds. With the first, after standing in a bottle in a dark place for some time, there will be a sediment in bottom of bottle, and it dries out quickly on work. The other I have had a long time and there is no settling in the bottle; when it dries out it leaves work bright, while the first one leaves a sticky substance. Both

oils are high grade. Which would you use?—Both Nye's and Kelley's watch oils are generally used and both are very good, always giving satisfaction if used properly. Watch oil should always be well corked and kept in a dark place. Every workman should have an oil cup, keeping in it as much oil as he would use that day. Should any be left over the following day, it should not be used, but the cup cleaned and fresh oil used for that day's work. By doing this you will have no more trouble with your oil.

(6) Please tell me what will take out a screw in a watch plate that is broken off in such a way that nothing will take hold of it. I think I have seen a recipe of an acid that will loosen it, but I cannot find it.—Remove all screws and steel pieces from the watch plate that contains the broken screw, then place the plate in a saturated solution of alum and water and let it remain over night or boil it, when the broken screw can easily be pushed out.

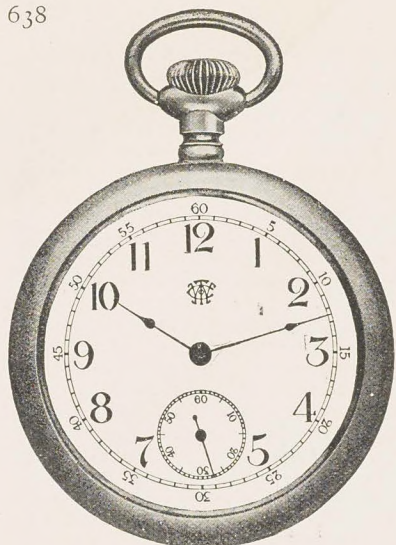
"Practice."—Please tell me what gear I need to get the result I want. I have a wheel that has 48 teeth. When it revolves twice I want it to revolve wheel No. 2 once, and I want wheel No. 2 to revolve twelve times to wheel No. 3's once. Please give me the number of teeth and leaves I want in No. 2 and No. 3 wheels to get the required result.—If wheel No. 1 has 48 teeth and wheel No. 2 wants to gear into No. 1, only No. 2 to go round once while No. 1 goes round twice, then No. 2 must have twice as many teeth as No. 1, which would be $2 \times 48 = 96$ teeth. Now, if the wheel No. 3 wants to go around once while wheel No. 2 goes around twelve times, the best way to do this would be to put an eight-leaf pinion in wheel No. 2, and as eight leaves would go around twelve times, the wheel that gears into it to go around once must have $8 \times 12 = 96$ teeth. Therefore, wheel No. 1 has 48 teeth, No. 2 has 96 teeth and eight-leaf pinion, and No. 3 has 96 teeth.

"Modeling."—Will you kindly tell us how to make modeling wax?—Modelers' wax consists of equal parts of beeswax, druggists' lead-plaster, olive oil and yellow resin, to which sufficient whitening is added to produce the consistency of putty.

"Adding."—(1) Will you kindly tell me if adding a small weight to the top of a pendulum makes the clock run faster, and is this a better way to regulate a clock than by turning the nut at the bottom?—Any weight added above the center of gravity to a pendulum will cause the clock to gain, and any weight added below will cause the clock to lose. A great many fine clocks are brought to time as close as possible by turning the nut at the bottom of the pendulum, but for final regulation they add a small weight to the pendulum. These weights are made of lead, brass and aluminum. What metal we use depends upon how much the clock varies.

(2) Will you describe how to adjust a clock having a mercury pendulum?—By adjusting, no doubt you mean to bring the clock to time in the different temperatures, heat and cold. This requires patience and considerable experience. The column of mercury in a pendulum that beats seconds wants to be about 7 to $7\frac{1}{8}$ inches long. Not knowing how the clock runs, of course, we do not know whether the jars contain too much mercury or not enough. Should the clock gain in cold weather and lose in warm weather, then there is not enough mercury in the jars; or, if it should lose in cold weather and gain in warm weather, the jars contain too much mercury. By adding or taking out some of the mercury, as the case may be, will, after repeated trials and patience, bring the pendulum to its compensating point.

(3) Why have Swiss watches three-cornered roller jewels?—Not only the Swiss but some of the American companies also use this kind of pin. It has no advantage over the jewel pin (a circle with two-fifths cut away), used by most of the American companies. The first three-cornered jewel pins that were made came to a sharp edge. They were found to be very defective, owing to the lost motion in entering the slot in the fork when unlocking the tooth; but those made to-day have the edges rounded and act and have the same advantage as the flat or two-fifth cut-away jewel pins.



THE MONOGRAM
TRENTON WATCH

For Beauty of Design, Perfection of Finish and Reliability,
combined with Moderate Price

TRENTON Watches

Are Unequaled

They are Pendant-Setting in all sizes, fitting regular pendant-setting cases.
Order promptly from your jobber. A sample line is convincing.

A Neat Sign or Advertising Booklets for the asking

Decorated Dials and Louis XV Hands for all
grades and sizes

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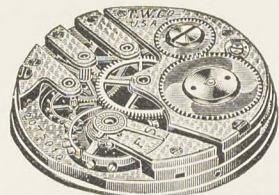
JOBBERS SELL TRENTONS

Manufactured and Guaranteed by the

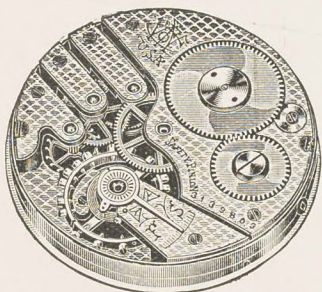
Trenton Watch Co., Trenton, N. J., U.S.A.



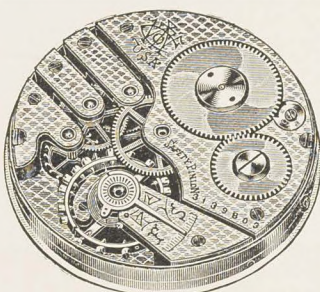
No. 100. Bridge Model, O Size,
7 Jewel, Hunting and Open-
Face, Pendant Setting



No. 310. "FORTUNA." 6 Size,
7 Jewel, Hunting and Open-
Face, Pendant Setting



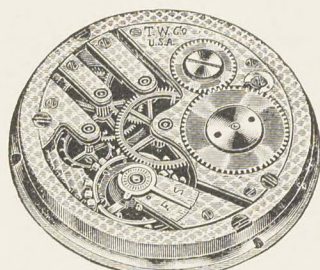
No. 130. Bridge Model, 16 Size, 7 Jewel,
Hunting and Open-Face,
Pendant Setting



No. 135. Bridge Model, 16 Size, 11 Jewel,
Hunting and Open-Face,
Pendant Setting



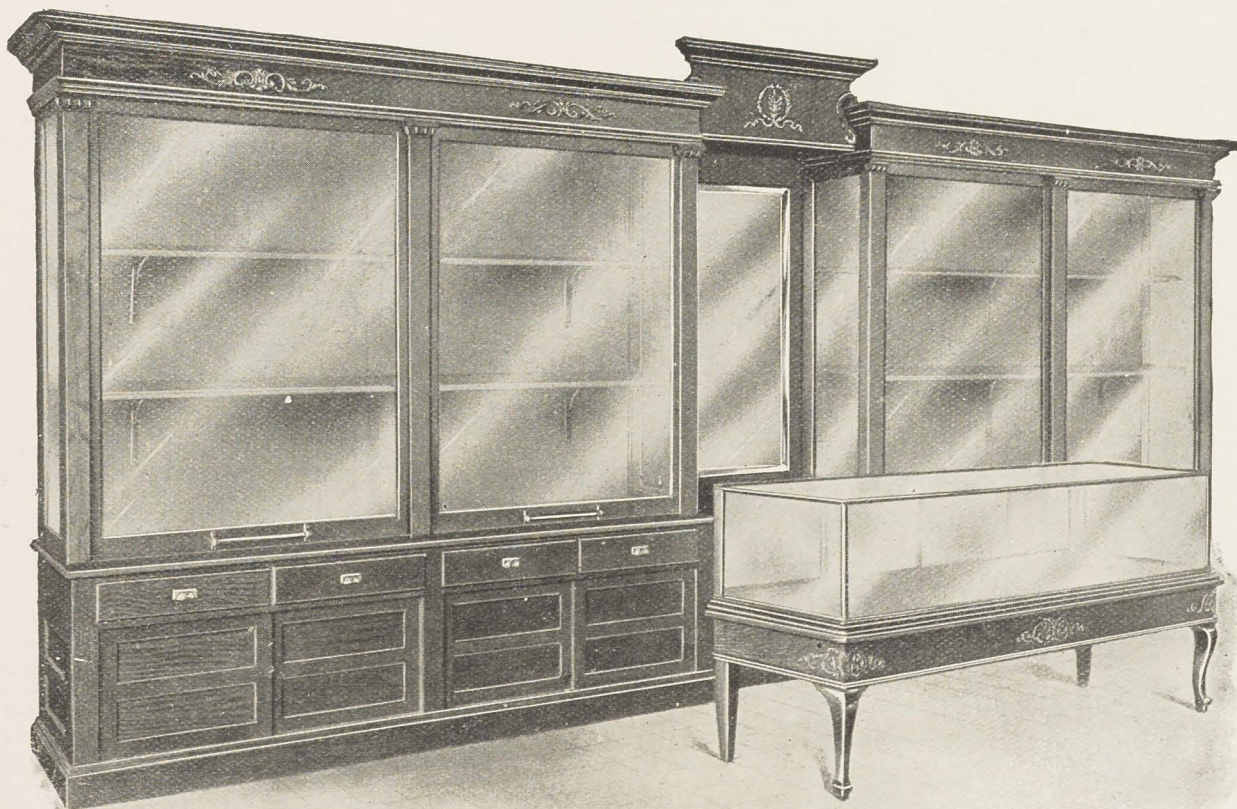
No. 140. Bridge Model, 16 Size, 15 Jewel,
Hunting and Open-Face,
Pendant Setting



No. 320. "FORTUNA." 12 Size,
7 Jewel, Hunting and Open-
Face, Pendant Setting

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High-Grade

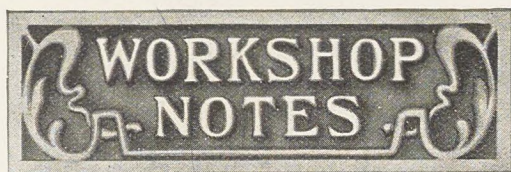
Jewelers'

Fixtures

COLONIAL WALL CASE No. 123
8 ft. long 8 ft. high outside
Upper part is 18 inches deep inside

SPECIAL No. 107B
Counter Case and Table

"THE BEST OF EVERYTHING"



Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. No attention will be paid to anonymous communications. Questions will be answered in the order in which they are received.

"Replaced."—*I have a fine Swiss watch that is jeweled with ruby jewels and I wish to substitute the cap jewels on the balance with rose-diamond cap jewels that I have collected from old English movements which I replaced with new American movements. As you well know, the cap jewel of a Swiss watch is in a large setting, which holds the regulator in position, and the setting is held down by screws from the under side. I wish to make a new setting, which will be a small matter; but, as the diamonds are of irregular shape, I don't know how to fasten them in the settings. Would it do to run soft solder in the jewel recess and force the stone upward, or would there be danger of breaking the stone?*—Soft solder is the last thing we would advise you to use, because the solder would corrode the oil in a very short time. There is only one successful way that we know of to fasten these jewels in properly, and that is to hard solder them. To make a setting of this kind we would proceed as follows: Take a piece of brass or gold, whichever you intend to make the setting out of, place it in the lathe and then proceed to turn a seat for the diamond jewel just the same as if it was an ordinary cap jewel, allowing the diamond to be a little below the surface and be particular to have a good fit; then remove it from the lathe and, by using gold or silver solder, hard solder it in its place. This is nothing more than a jeweler's job. The diamond, when soldered in, may not be absolutely flat. It can be made flat, however, by placing a piece of brass wire in the lathe, turn the end down a trifle smaller than the flat side of the diamond, shellac the setting to the wire, which will bring the diamond flat; now turn your setting true. It should then be reversed and shellaced to a larger piece of wire and the lower side turned true; also turn to fit the regulator. Putting in the screw holes and finishing the setting, we take it for granted, you are familiar with.

"Binding."—*Will you please tell me through The Keystone how to correct the fault when there is no draw on the pallet stones? Sometimes I strike it, but do not know how I struck it. Sometimes I also experience trouble with the guard pin binding on the roller, even if the escape-wheel tooth is in the locking face of the stones. The guard pin is close enough to the table so as not to let the watch overbank, but it will bind on the table sometimes and stop the watch.*—Draw on a pallet is necessary for an escapement to be in good condition. The angle of the locking face of the tooth and the angle of the pallet stone are what creates draw. Sometimes (but rare) these are not correct, therefore there is no draw. But we can tell if these angles are correct and if the escapement has draw by noticing very carefully when we move the fork to allow the escape-wheel tooth to leave the locking face of the pallet. Now, when moving the fork, if the escape wheel moves backwards a trifle while unlocking, then the escapement has the proper angle to have draw; if it should have none, then the trouble lies not in the construction of the escapement but in the parts thereabouts, such as bent pivots, pivot holes too large, no end shake, dirty or chipped pallet stones, or something of this kind. In trying for draw, if you find that the escape wheel does not retard but stands neutral, then there is no draw, and none can be had until the angle of the pallet is changed. See July, 1901, KEYSTONE, page 721. An escapement that has no draw will allow the guard pin to rub on the roller table. The object of the draw is to keep the lever over to the banking pin, therefore, the guard pin free from the table; but, still, if the

guard pin should touch the table, it should not bind. The edge of the roller table should be smooth and well polished, and free of all nicks or foreign substances, such as shellac, etc. The guard pin should also be smooth and polished. The edge of the roller table being rough, we think, is the cause of the guard pin hanging there and stopping the watch.

"Barrel."—*How is the barrel arbor of new-style Waltham 23-jewel, 16 size taken apart?*—The Waltham Company has issued a circular concerning this matter, a portion of which we reproduce herewith: In all modern Waltham movements (except 18 size, model of 1883, known as Church model) the main wheel and barrel are separate pieces, which arrangement constitutes a safety device. The main wheel revolves continuously upon a stationary barrel arbor, and transmits the power of the mainspring to the rest of the train. In all 18 size Vanguard or '92 model, and 16 size '99 model movements, containing 19 or more jewels, the main wheel is fitted with two jewels, forming the bearings on which this wheel turns upon the arbor during the entire running of the watch. Watches having these jeweled main wheels are provided with a barrel arbor made in two pieces. To separate the main wheel and barrel, hold the mainspring barrel in the thumb and finger of one hand, and with the other place upon the square of the arbor a winding key, or winding wheel, and turn backward. The construction of this main wheel and barrel will be understood by referring to Fig. 1, the reference letters showing: A, top plate; B, lower or pillar plate; C, tempered steel mainspring barrel, having a square hole to fit

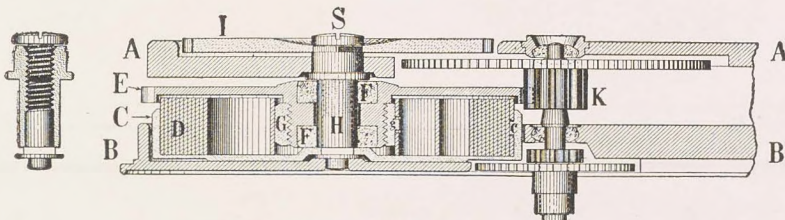


Fig. 1

barrel arbor, and having a hook (c) on its inner periphery to engage outer end of mainspring; D, mainspring; E, main wheel with hub; F, jewels in hub of main wheel; G, steel collar screwed to hub of main wheel and provided with hook (g) to engage inner end of mainspring; H, polished steel barrel arbor, also shown in sectional view; I, steel winding wheel fitting a squared portion of barrel arbor; K, center pinion engaging teeth of main wheel. Detailed view of barrel arbor shows it composed of two members, each of which is provided with a squared portion, on one of which the winding wheel is secured by a large-headed screw (S). The lower member of this arbor is provided with a squared portion and a flange on which fits the steel barrel, and when the two members are screwed together the barrel is held between them. In connection with the foregoing, we might add that Kendrick & Davis, Lebanon, N. H., have invented a tool to facilitate the operation, known as a key or holder for Waltham jeweled main wheel arbor. The tool is an excellent one for the purpose and may be obtained from any of the tool and material jobbers whose announcements appear on our advertising pages.

"How Much."—(1) *Why is it that a watch which I have will not keep as good time as it once did? I put in a hole jewel and roller jewel. It runs too slow—regulator way over. It has good motion. Another one had new pivot and hole jewel and is the same way.*—There are so many things that will cause a watch to vary in time that it is impossible to tell just what the trouble is with your two watches losing, unless we should see them. Are you sure that the repairing you did to them was done properly, and are you sure that the cannon pinion is not loose, or that the hands do not bind or that the curb pins are not open too far? A great many workmen have a habit of opening the curb pins in order to give the hairspring plenty freedom. This is a bad fault, for no watch can be regulated when the curb pins are in that condition.

(2) *How much oil is safe to put on a watch? I see watches that have a large drop on each pivot. It is hard to say in words just how much oil to put on a watch. If we put too much on the pivots it will run away, and if not enough it will run dry; but it is the happy medium that we want to use. Perhaps a good idea would be for you to examine some of the new movements that you have about the store and note the amount of oil they have on the pivots, and oil your watches accordingly.*

(3) *What is isochronism?*—Isochronism is a certain correspondence or relation between the proportions of a hairspring and of a balance, and such that under proper conditions the spring will move the balance through greater or smaller arcs in equal times.

"Slightly."—*If a watch balance is slightly out of true in the round, what effect will it have upon its regulation? What in the flat, and to what degree?*—A watch that contains a balance out of true in the round cannot be regulated. It will run fast or slow according to the position it is placed in while running. If the balance is out of true in the flat it will vary in time, but not as badly as one out of true in the round. The truer in the flat the balance is, the less air resistance; therefore, a more uniform vibration.

"Brand."—(1) *Please tell me what karat solder to use on various grades of goods?*—The practice with manufacturing jewelers is to take a portion of the gold they are working and reduce it two karats by alloying it with easy-flowing silver solder. This keeps the color the proper shade for the work in hand. Every jeweler should have several shades of ten, twelve, fourteen and eighteen-karat solder to match the varying jobs which come in. Every workman of an extended experience knows that he may compound twenty batches of gold solder, each apparently alike, and out of that number three or four samples will seem to melt easier and flow better than the rest of the lot. When the workman strikes a sample of especially satisfactory solder it is a good idea to keep it for bothersome jobs such as will occasionally inflict themselves.

(2) *Is Eureka better than borax? What is the best brand of solder?*—These are matters that depend so much on the preference of the individual workman that we would not care to make a positive statement as to "which is best."

"Break."—*Does over-oiling a watch mainspring ever cause it to break? What kind and what quantity of oil should be used on mainsprings?*—We do not think too much oil would cause the mainspring to break. We would recommend clock oil or vaseline. See answer to "How Much," in another column.

"Engrave."—*Please give recipe for making best transfer wax for engravers?*—There are so many kinds of transfer wax employed at the present time by different workmen, each of whom probably considers his the best, that we would hesitate to advance any formula of our own with the claim that it is the "best." However, we will give a formula that is used by a great many and which we do not think will prove disappointing in results: Beeswax 3 parts, tallow 3 parts, Canada balsam 1 part, olive oil 1 part. This may be used not only for transferring engraved designs from one piece to another, but also to protect the surface of polished articles while designing thereon with a stylus.

"Overbanking."—*I have trouble with 18-size Elgin and Waltham movements overbanking. Can you give me the causes?*—This subject has been covered fully quite a number of times in this department, therefore we refer you to August, 1905, KEYSTONE, page 1303; "Ruby," January, 1902, KEYSTONE, page 69.

ANNOUNCEMENT

Our Offices are now at

47-49 Maiden Lane, Myers Building, **NEW YORK**

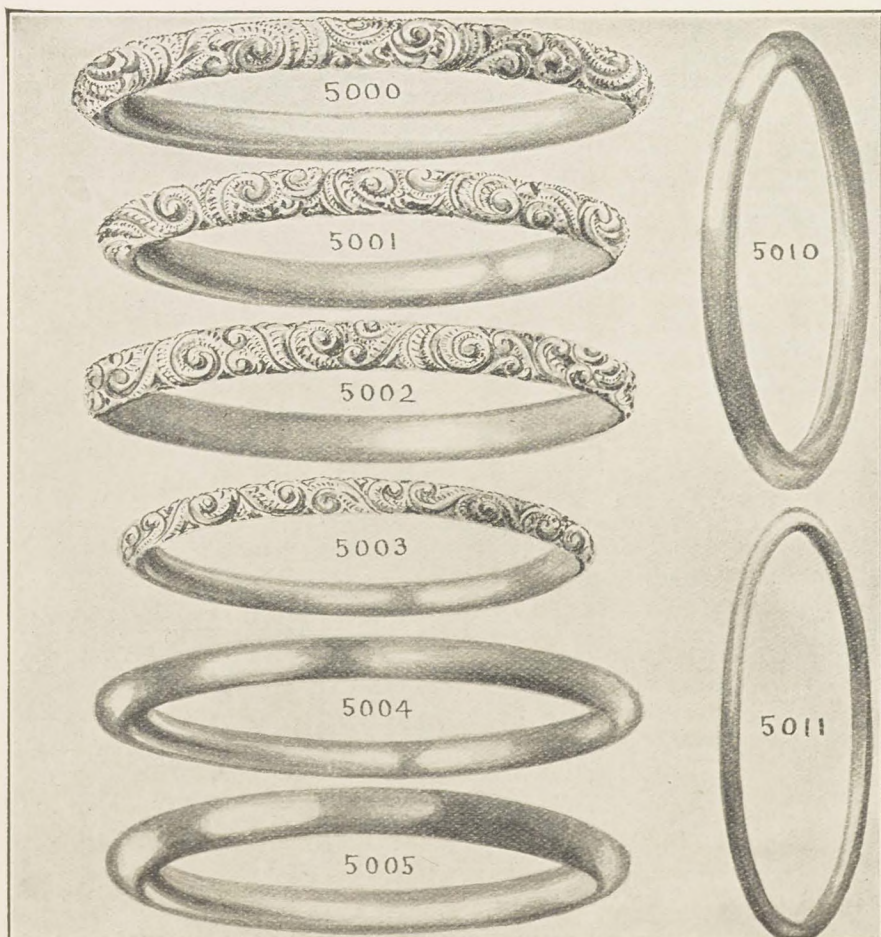
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DIAMOND CUTTERS
MANUFACTURING JEWELERS

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"You have seen us in Brooklyn
See us in New York"

R., L. & M. FRIEDLANDER



14 K. and 10 K. Solid Gold and Gold Filled Nethersole Bracelets

Importers of Diamonds

Jobbers of American Watches

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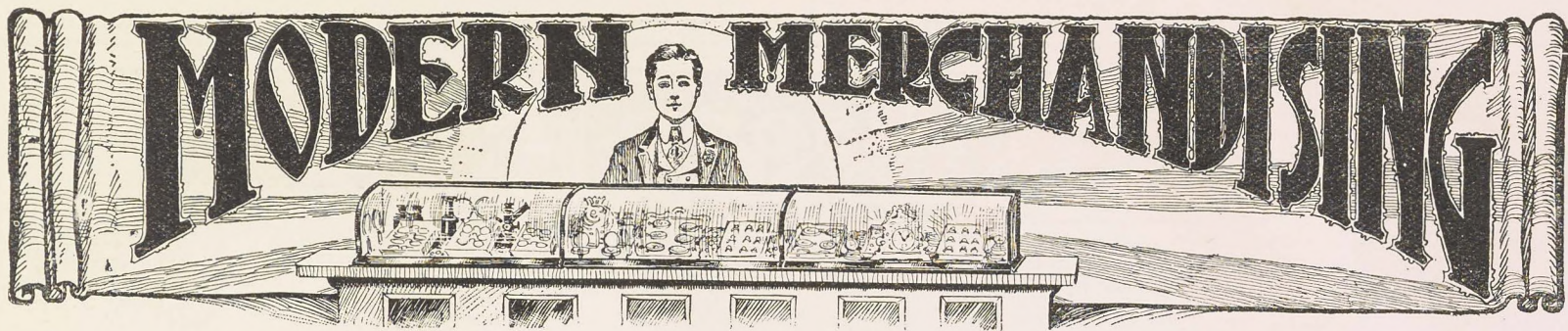
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New York City**

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Do you know that **Nethersole Bracelets** are very popular this year? We carry a complete line in 14 K. and 10 K. **SOLID GOLD**, also **GOLD FILLED**. We show herewith a portion of a page from our fine new catalogue. If you have not yet received our new **ILLUSTRATED MON-ARCH CATALOGUE** No. 60, ask for one.

Just now we have a few "Specials" in 14 K. and 10 K. **SOLID GOLD NETHERSOLE BRACELETS** that are not shown.

If interested, write for prices.



Latest Tendencies in Window Display

THE various developments in the evolution of advertising are being closely paralleled in the matter of window dressing. In both, the latest tendency is towards the form which experience and reason suggest as the best, not simply to attract attention, but to sell goods. The transition from the unattractive jumble of a decade ago to the bizarre, complicated and expensive trim of a later day proved too extreme, utility being sacrificed to display effect. The reaction is now manifest, and the spectacular designs are giving way to simple dollar-bringing effects in which goods and prices play the leading part.

Commenting on the latest development, the *Merchants' Record and Show Window* says: "Not long ago the best trimmers were making displays that were veritable wonders in design and workmanship. At that time every big store tried to outdo the other in the grandeur of its window settings. Old files of the *Show Window* are filled with pictures of window displays that are wonders of inventive genius and complex mechanical construction. These displays were masterpieces both in conception and workmanship. They drew great crowds and no doubt accomplished their purpose in advertising the stores that used them. The day of these elaborate settings, however, is passed. Occasionally they are seen now, but only at Christmas or on some special occasion. These displays marked a period of transition in window dressing. Merchants were just beginning to realize the value of their show windows and they had not yet learned to discriminate between the display that draws a crowd and the one that sells the goods. After while they awakened to the fact that they were not selling backgrounds but merchandise. Then came the change."

Our contemporary does not accept the view that the change will make easier the work of the window trimmer and lessen the opportunity for the display of his genius. It rightly argues that "the inherent curiosity in people make it an easy matter to draw a crowd with some sort of mechanical show in a window, but it requires genuine art to put in a simple display of merchandise that will make people stop and admire. The old-time trimmer had to be carpenter, electrician, painter, modeler, inventor and many other

things. The modern trimmer has a smattering of most of these things, but he is essentially a designer in color and line. His backgrounds are designed not to attract attention to themselves but to show off the goods to advantage. Most of his effects are obtained by the judicious handling of colors and the artistic arrangement of goods."

Flowers as a Store Decoration

EASTER is pre-eminently the festival of flowers. Its simultaneity with nature's first floral outburst emphasizes the timeliness of this most pleasing of all decorations. The wide-awake department stores recognize the business value of flowers and plants and are using them yearly in greater abundance. A great impetus has been given to this form of store beautification by the introduction of artificial flowers, the manufacture of which is now an industry of large proportions. These wonderfully-perfect counterfeits of nature's handiwork make floral decorations possible all the year round and at comparatively little expense. The imitations are wonderfully real, all but the perfume being reproduced with remarkable fidelity to the original. The product of the artificial flower factory is now almost as comprehensive as that of the field, including all the leading decorative plants and efflorescences, and flowers suitable for any occasion or season are readily procurable. The jeweler will do well to keep in mind this economic and very effective means of adding to the attractiveness of his Easter display.

Points in Fire Insurance

A RECENT store accident and a resultant law suit served a useful purpose in calling attention to the restrictions usually incorporated in fire insurance policies in regard to the storage or use of explosives. As it is necessary for the jeweler in the cleaning and plating branches of his business to make free use of such substances as gasoline, benzine, etc., he should see to it that the terms of his policy embody the permission of the underwriters to use such explosive materials as his work calls for. Without such permission the use even of necessary explosives may make the policy void.

It also transpired, in recent litigation, that unless the policies contain special provision therefor property of the store not "within" the premises insured is not covered by the policies; for example, signs attached to or painted on the outside of the building, or show cases located outside the building. It is not sufficient that such items be included in the store's inventory of fixtures, etc. To be "covered" they must be specifically mentioned in the policies or in the "forms" attached thereto.

Commenting on the above, the *Dry Goods Economist* makes the suggestion that to remove all doubt, merchants in describing the location of their risk might well adopt some such phrase as "In, on, under or about." For instance, instead of having the usual paragraph in the form attached to the policies reading: "On merchandise, etc. (or on fixtures, etc.), * * * contained in the building situated * * *," it might be well to vary this paragraph so as to have it read something to this effect: "On merchandise, etc. (or on fixtures, etc.), * * * contained in, on, under or about the building, and additions thereto, situated * * *." By such means, it is claimed, all outside signs, as well as property on the sidewalk or in show cases thereon, or in vaults thereunder, would be covered.

Brains the Best Capital

"IF I only had capital!" How often have you heard that exclamatory wish? "If I only had the money to back me, I'd be a great business man—I know I would." How many of your acquaintances have told you that in a confidential way. Such wishing is an expression of a certain amount of life, but it does not necessarily denote much mental activity. This class of men generally have a larger wish-bone than back-bone. Genius in business, as in art or literature, does require a desire from within to serve as inspiration, but that desire must be boiling enough to start the perspiration as well. "To him who hath shall be given." If a young man has not brains enough to persuade capital to back him, he is generally not worthy of the trust. It is right that a man should prove his ability before he is entrusted with position.

The Allsopp Rings

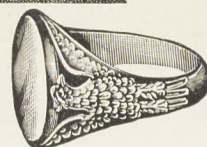


No. 6314
Tiger
Diamond, Ruby Eyes

THE UP-TO-DATE LINE OF

Signet and Set Rings

In twenty years we have built up a business second to none in Rings exclusively. ALLSOPP QUALITY, DESIGN and WORKMANSHIP appeal to the most fastidious. It will pay you to examine a selection package.



No. 6077
Eagle. Signet

A ★
TRADE-MARK

ALLSOPP BROS., Allsopp Building, NEWARK, N. J.

ROYAL DOULTON Fine English China and Earthenware



Illustration shows one of Doulton's Latest Novelties "MOTORING"

WM. S. PITCAIRN

19 Murray St.

New York

WHEN YOU SELL THE Simplex Adjustable Collar Supporters



Actual Size
Shortest Length



Actual Size
Longest Length

(Patented Nov. 28, 1905)

You make both PROFIT and CUSTOMERS. Its adjustment is simply a half-turn and there it stays. The crotch on each end explains why it holds both the collar and itself in place. No spring or intricate mechanical construction to get out of order and puzzle milady.

Made in Sterling Silver, Fine Rolled Plate and Gold Filled. Mounted with Round and Half-Round French Pearl, real Baroque Pearl, and all colors of Oval and Round Stones.

Having the best at the right price and HAVING IT FIRST has made

MANY MERCHANTS MERRY

If your jobber can't supply you, write direct to the

Davis Mfg. Co., Providence, R. I.

17TH SUCCESSFUL YEAR

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ESTABLISHED 1889

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RICHARD O. KANDLER, PROPRIETOR AND CHIEF INSTRUCTOR



RICHARD O. KANDLER
Founder of the
Jewelers' School of Engraving

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OF ITS KIND

BEST AND ORIGINAL
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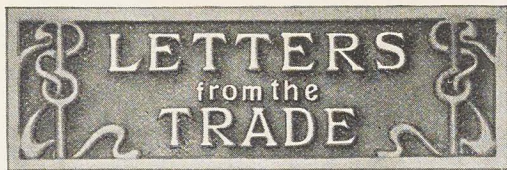
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TRADE ENGRAVING

RICHARD O. KANDLER'S STUDIO
1104 Heyworth Building, Chicago





Readers are requested to send for publication new ideas on any subject, technical or mercantile, of general interest to the trade. As this page is for the use of individual readers, we do not hold ourselves responsible for the views expressed.—Editor The Keystone

Local Organizations of Jewelers

ED. KEYSTONE:—As I am an ardent reader of your progressive journal, and as you invite correspondence on local organizations of the jewelers in your March issue, I take the liberty to give what little I know on this subject, and hope it will be of some benefit to your readers.

Wherever conditions allow, I want to say to the jewelers: organize by all means. All lines of business are organizing; it is a necessity, "get out of the rut." Organize for mutual protection and to promote friendly feeling, act as brother jewelers should, let the public know and feel it, thereby elevating the craft before the public eye. Let not the department stores or mail-order houses take that which you are entitled to. Wake up and bind yourselves together to fight this great evil that besets your craft. By all means organize locally. Right here at home we have organized, and I will tell you what it has done and what it will do.

I have realized for some time that a local organization amongst the jewelers of the tri-cities, viz.: Davenport, Iowa, and Rock Island and Moline, Illinois, would be of great benefit to our jewelers. Last January I approached the several jewelers in the three cities, and without an exception they all agreed to join in the movement. A meeting was called February 15th for the purpose of permanent organization. Out of the twenty-one jewelers agreeing to join, sixteen were represented. We effected a permanent organization, known as the Tri-City Retail Jewelers' Association.

The objects for which this association has been established are: to afford the retail jewelers of the cities of Davenport, Rock Island and Moline the opportunity of entering into advantageous and friendly intercourse with one another; uniting for the mutual protection of the craft against the many trade abuses that exist; to quicken the interest and enlarge the views of the jeweler, to the end that he will aid and encourage those who are honest in trade protection; to keep watchful eyes on the illegal enterprises that are conducted to the detriment of legitimate trade, and take firm stand against them, to carefully scrutinize the qualities and makes of goods offered by manufacturers to retailers, and, by assays and other means, to commend honest makers and condemn dishonest ones; to take part in any public movement of business men for the purpose of elevating the craft and materially assisting the general prosperity of the three cities.

Our association has had a meeting since organizing and expect to have special meetings monthly. Regular meetings will be held every three months. Let me tell you (and I say it truly) that I enjoy our meetings, and, if I shall judge by our last attendance, so do the others. Friendly feeling exists now—something unheard of before. Our debates are interesting, and as we proceed all the difficulties heretofore encountered will disappear, such as giving values on goods purchased elsewhere, price cutting, petty jealousies, spite work, and many

other grievances; in fact, we have confidence in each other, and have banded ourselves together for mutual protection and friendly intercourse.

To the jewelers of our State I want to say, by all means join our State association. We want you, we need you. By giving us your help, you will help improve your own conditions. We must stand together as one man in united actions to overcome the obstacles the retail jeweler is confronted with. This is the only remedy open to you, therefore it behooves you to act at once.

Thanking THE KEYSTONE for the space afforded me,

Yours very truly,

J. M. NABSTEDT,

President, Tri-City Retail Jewelers' Association,
Vice-president, Iowa Retail Jewelers' Association.

Davenport, Iowa.

Removing Back or Bezel from Screw Case

ED. KEYSTONE:—Thanking you for the many good pointers I get from your journal, I offer one that may interest some of your readers. To remove the back or bezel from a screw watch case, procure in a drug store a small rubber sponge, press the sponge on the case and twist.

Yours truly,

Dodge City, Kans.

W. H. CHAPMAN.

Organization and Competition

ED. KEYSTONE:—I have been spending this snowy afternoon reading THE KEYSTONE and have found much to interest me. Particularly have I read and re-read the editorials on "Need of United Action" and "Competition as a Factor in Trade." Some personal observations are in mind and I will write them for the benefit of my brother jewelers. At one time I wanted to form a local "union" with my competitor, and I went to him earnestly requesting that we come to some agreement in regard to our prices. He had been here longer than I, and was the established jeweler, and as I was just beginning I deemed it proper to suggest that we hold up his prices, and we agreed to do so. Among other things, we agreed to sell the ordinary screw bezel and back nickel case at \$1.25, and that very same evening a young man came into the store and asked the price of that kind of a case. I, of course, remembered the "union" and quoted it at \$1.25, and was informed that he had been offered one at 75 cents, so I took the young man and together we went to the other store, where I asked regarding it. I was informed that I could manage my own business and he would his. I told the young man that I would put one on for \$1.25 and no less, using a little reason and argument, and he bought the case from me, and has been my customer ever since. Now, how can you hold a union in that case? Time and time again have I found out that cutting was being done, but I maintain my prices and never let on that there is such a one in business as my competitor.

Now, in reference to competition being the life of trade, I find that it is so; my trade is stimulated each day by the competition I have, and the catalogue houses do not cut into my trade to amount to anything, for I have a system of getting there first. I use the mails myself and make the patrons see that we are the people when it comes to giving good goods for good money. I have some patrons, three in particular, who send to catalogue houses and get their dry goods, groceries, hardware and even their medicines; still I have sold them

watches, clocks and pianos. A little sociability, taffy and diplomacy will work wonders with our farmer friends.

We jewelers of Illinois will get together at Springfield, on April 10th, to form our State organization; I hope to be much benefited by this movement. If the jewelers of the republic can be fraternized, we will find out that we were foolish for a great many years. We are the worst price cutters in the mercantile lines, and we need education along that line. I, for one, hold to legitimate profits; have one price for one and all, and my motto is this: "If you don't want our goods at our prices, leave them alone, some one else does."

Yours truly,

Nokomis, Ill.

S. M. STRAIN.

Power for the Workshop

ED. KEYSTONE:—Having read Mr. Huffmann's letter in the March KEYSTONE in regard to workshop, I offer my mite of information.

The half-H. P. engine would, I think, be too small; as gas, gasoline or oil engines cannot be overloaded. They will do a certain amount of work, and if a greater load is put on they simply stop. Steam engines have been known to develop much more than their rated H. P.

I do not mean to condemn the half-H. P. engine entirely, but in most cases I think it worth while to consider one a little larger.

The first cost of a small engine is not great, and it would be better to have too much power than to start with just enough to do the work. A new machine might be added as his business grew, and besides, the life of an engine is much longer if not worked to its full capacity.

The cost of running a small engine is hardly worth considering. I have been using a two and one-half H. P. gas engine for more than a year, and the cost for natural gas has been less than one-half cent an hour. Using gasoline, the expense would be only a little more than for natural gas, I'm told, but I have not tried it.

The foundation for even a small engine must be rigid and free from vibration. Cement is probably the cheapest and answers admirably.

In a shop equipped with power, many conveniences may be enjoyed. I have a small *high pressure* blower to furnish blast for a small furnace and an automatic blowpipe. This blower could probably be used for sand-blast also. To get an even flow of air, I put a tin reservoir in the line. This reservoir is about 10" diameter and 16" long. The pressure is regulated by two valves, one at the burner or blowpipe, the other where the line enters the reservoir. The latter allows the excess of air to leave the pipe instead of backing up on the blower. A safety-valve could be arranged, but I have found this scheme very satisfactory. My air line is the standard 3/8" gas pipe *without elbows*. Where it was necessary, I heated the pipe and bent it so there would be as little friction as possible.

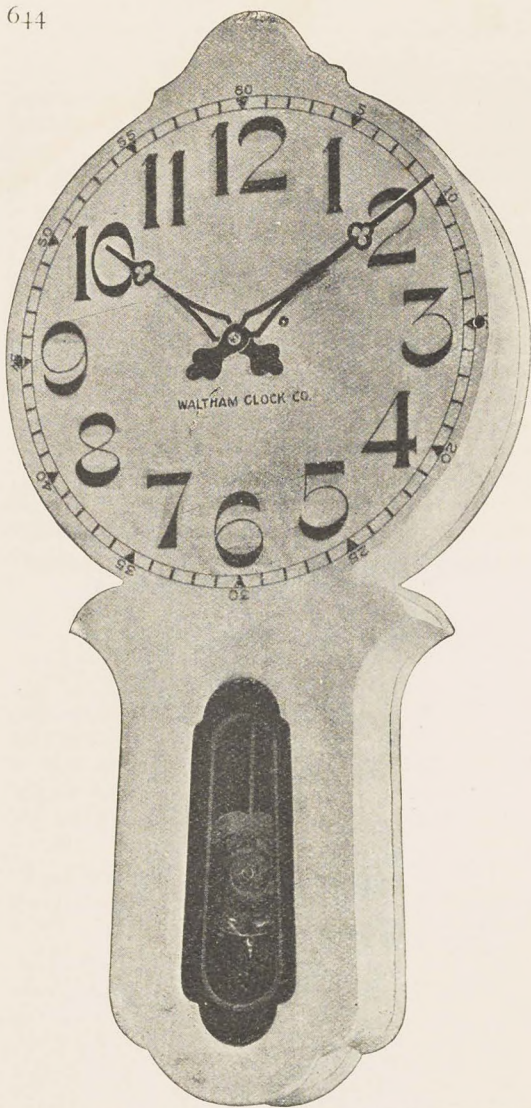
A good grindstone is a convenience, if not a necessity. A small generator might be used to furnish electric light for shop and also to furnish current for plating, coloring, etc., and for a demagnetizer. It would not be much trouble to rig up one or two fans to use in the hot months.

The rolling mill and draw bench might be operated by power if there is much work of that kind to be done.

Yours truly,

Titusville, Pa.

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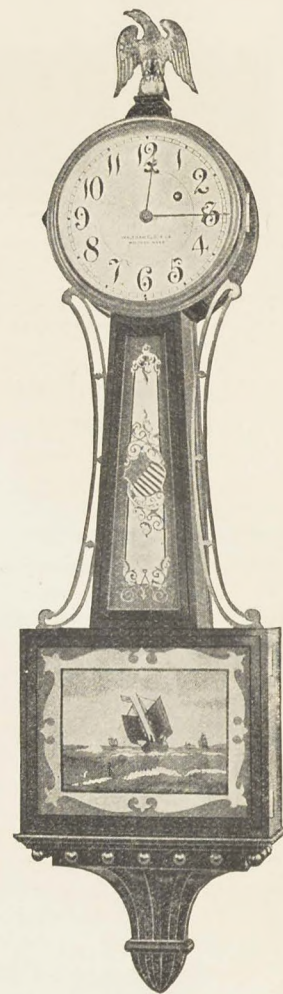
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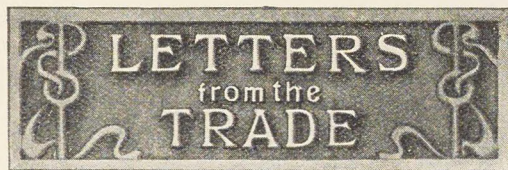
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Readers are requested to send for publication new ideas on any subject, technical or mercantile, of general interest to the trade. As this page is for the use of individual readers, we do not hold ourselves responsible for the views expressed.—Editor The Keystone

The Carat Weight

ED. KEYSTONE:—A question of more than ordinary interest to the jewelry trade and one that has given me more than a little concern, is the subject of weights and measurements of diamonds and all precious stones. Since the question has been often asked and never denied that a carat, in diamonds, was 4 grains, we rise to ask this question: When and by whom was the carat changed to 3 grains? In other words, the diamond weights, when placed on the scales, show that 1¼-carat diamond weights weigh just 4 grains. We believe THE KEYSTONE will look this matter up and tell us, if they can, who it is that is responsible for the carat being 25 per cent. short. Is it possible that the diamond importers go to Europe and buy diamonds and pearls and all the precious stones by the grain and then sell to us by the carat and that the carat weight has been so manipulated that they are 25 per cent. short?

Respectfully,

Minneapolis, Minn.

A. E. BARKER.

[The carat used for weighing diamonds has a fixed weight of 3⅞ troy grains, and is divided into quarters, or "carat grains," eighths, sixteenths, thirty-seconds and sixty-fourths. These carat grains are thus less than troy grains, and hence the necessity of a separate set of diamond weights. But even the carat with fixed weight varies in different countries. In England and the United States it equals 3.17 grains troy; in France 3.18 grains troy, and in Holland 3 grains troy.—ED.]

A Crux In Letter Engraving

ED. KEYSTONE:—A question has come up here that I would like your opinion on, and I think it would be a good thing to answer also in "Letters from the Trade."

I learned to engrave at the Landis School of Engraving, Detroit, and was taught to make an Old English "J" thus **J**. In writing Mr. Landis a letter recently, he asked me what kind of a botch printer embossed our stationery, claiming "Jeweler" was spelled with an "I."

I spoke to the printer and he produced a font proof of the latest modern Old English, sent by the American Type Founders' Co., giving the letters in rotation, showing **J** was an "I," and **J** was a "J." He also showed me a style-book from these people, in which they had used **J** for spelling "indicated," and **J** for spelling "July."

Now I have noticed that engravers use these letters both ways, and would like to know which is correct, and would appreciate any information you might give me regarding Old English.

Very sincerely yours,

Caro, Mich.

CHAS. F. DYER.

[This difference of opinion between the engraver and type designer is interesting, and how it originated seems to be a mystery. The accepted distinction, however, is that of the engraver, and the type designer would do well to get in line. We must, of course, keep in mind that there was no letter "J" in the Latin alphabet, from which our

own is derived, and that "J" was originally a modification or development of "I," both being really the same letter. For instance, in the Scriptural inscriptions, "I. N. R. I." and "I. H. S.," the letter "I" is the initial of the sacred name, and rightly so, for the use of "J" for "I" in the Latin text-books was an innovation of post-classical times. The American Type Founders' Co., when their attention was called to the matter, said: "The query is an old one and difficult to answer, because there is really no rule or principle that definitely applies to type designing. All designers of letters will tell you that there is no set rules for guidance in making their designs. Every letter has its own peculiar construction, and its final acceptance is only accomplished after many alterations are made having relation to comparison with other letters, its mechanical build and the field of printing for which it is intended. While the style of type is the conception of the designer, the finished product is often brought about by suggestions from the commercial men who attend to the selling end of the business. It is difficult to make all the characters of a font to follow the general design of the letters as a whole, and many designs of individual letters are made to keep from conflicting with characters that are found to be somewhat similar in other productions. The cap, "I" is especially difficult in this connection, because it offers so few chances to specialize. In the text letters it is most difficult to create anything of a pronounced or typical character, for the reason that there is a range of similarity in all of the styles, but made to look somewhat different by creating heavy and light letters extended and condensed." As the type designers, therefore, simply follow the "rule of thumb," it would be well for them to adopt the precedent set by the engravers.—ED.]

Ascertaining Standard Time

ED. KEYSTONE:—Your article on the above subject in the March issue, though instructive, is not fully explanatory. As this is a matter with which all members of the trade should be acquainted, let us go to the bottom of the matter by visiting an observatory and seeing just what the astronomer does.

We must not go at midday, as he does not use the sun to get the time by. In the evening we may find him at work, and fortunate shall we be if he permits us to sit down in the room and silently watch his operations.

In the center of the dimly-lighted room is the meridian circle. The roof shutters have been opened and we may see the stars trooping past on their way to the Western horizon.

On a table near the instrument stands a chronometer, ticking off each half-second; by its side lies a book containing a list of stars. The book gives the right ascension and declination of each star.

The astronomer glances at his chronometer and sees that its reading is about 8 hours, 53 minutes. In the list he finds a star whose right ascension is 8 hours, 56 minutes, 4.93 seconds. The star will, therefore, cross the meridian about 8 hours, 56 minutes, and will come into the field of view of his instrument a few seconds before that time.

Looking at the declination he mentally figures out the reading of the silver circle, when the telescope has the proper slant to the horizon. In a minute he has turned the telescope on its horizontal axis till the circle has the proper reading, and has applied his eye at the eyepiece.

Faint stars come drifting through the field of view, shying past the golden spider-webs as if they wished to escape from the astronomer's gaze as quickly as possible, but he pays no attention to them.

In a short time the expected bright star appears on the edge of the field of view, glowing like a little sun.

The observer glances quickly at the chronometer and begins counting the readings of the second-hand: "Four, half, five, half, six, half," he says to himself as he resumes his place at the eyepiece.

The star moves onward, it has leaped across the first spider-web, and the astronomer hurriedly writes in his notebook the figures 13.1.

He has estimated that the star crossed the first spider-web one-tenth of a second after the chronometer ticked the thirteenth second of some minute.

Hurriedly glancing at the chronometer's face he again counts, and after a few seconds he makes another record, perchance 24.7. Thus he continues till the star has crossed the last spider-web; having gotten the seconds and fractions of a second as correctly as he can, he writes the minute and hour more leisurely. The record stands as follows:

	13.1 seconds.
	24.7 "
	33.6 "
	42.4 "
8 hours, 55 minutes.	54.1 "

The average of these five times is 8 hours, 55 minutes, 33.58 seconds. That is the time, as near as the astronomer could estimate it, which the chronometer read when the star crossed his meridian. The book on the table states that the star really crossed the meridian at 8 hours, 56 minutes, 4.93 seconds. The chronometer must, therefore, be in error, and by subtracting the chronometer time from the time given in the book we get a remainder of 31.35 seconds; therefore, the chronometer is 31.35 seconds slow.

If the observer could estimate the time when the star crossed each spider-web accurately, and the instrument were perfectly adjusted in the meridian, one star would be sufficient, but the instrument has many errors, which must be taken into reckoning, and it takes men time to think; the more complicated the operation the greater the time, and the observer cannot do anything as accurately as he wishes. He, therefore, observes several stars, and applies the refinements of mathematical analysis to the problem in order to determine the errors of the instrument.

From the observation of each star he obtains a value of the error of the chronometer; these he combines, taking their average as a final result.

After this final result is obtained, no endeavor is made to keep a standard clock right, as the constant changes which would be necessary would introduce intolerable disturbances in the clock's performance. It is, therefore, permitted to go on month after month without any alteration, its errors and rates being determined from time to time by observation of the stars.

We have seen how an astronomer gets time, and how he endeavors to keep it. How it is flashed around the world was told in the article in your March issue.

Truly yours,

Weils, N. Y.

SAMUEL A. WEAVER.

Handling Watch Plates

ED. KEYSTONE:—It will interest "Bridges," whose questions appeared in a recent issue of your journal, and possibly others of the trade, to know that he can handle watch plates, *a la* watch factory, by soft soldering a thin piece of copper to the inside of the blades of his tweezers.

Truly yours,

Granville, N. Y.

FAY MCFADDEN.

Fourteenth Annual Banquet and Dinner of the Retail Jewelers' Association of Missouri

In comradeship, attendance and enthusiasm the fourteenth annual banquet and dinner of the Retail Jewelers' Association of Missouri, held at "The Breitling," on the evening of March 7th, was one of the most successful ever held by this association. It will long be remembered by those present as one of the most enjoyable gatherings of this nature ever held in St. Louis. In this respect it was considered ahead of the big full-dress function given two years ago by the Missouri jewelers. The idea of the members and their friends appearing in an informal way was a popular feature and will likely be continued.

President Mauch stated that he had been asked why there were not more out-of-town jewelers present at the feast. He said the failure to get favorable rates from the railroads was one cause. He suggested that it would be a good plan to have the next meeting of the association a two or three-day session, with an interesting and helpful program. This meeting could be well advertised and thus attract members of the trade from all over the State. Mr. Mauch announced that it was his idea that such a program would prove a magnet to attract jewelers to the meetings of the association.

The Missouri Association is now one of the oldest, if not the oldest, State organization among the retail jewelers of the country. Its organization dates back over fifteen years. Its membership is scattered over the State, but a large majority of its members hail from the city of St. Louis. Here it has done its work and held all of its gatherings. But now a majority of its active members, like President Mauch, believe that the time has come when the Retail Jewelers' Association of Missouri should reach out and take in the entire State and thus enlarge its field of activity and the excellent work it has been doing in the past. There are hundreds of jewelers in the State of Missouri that are not members of this organization who should be. During the current year a large percentage of this number should be brought into association work.

The Missouri organization is officered by able men who are thoroughly familiar with the principles and workings of organization effort. It is now up to the jewelers in the cities and towns outside of St. Louis to organize their towns and counties and the State Association will lend their aid to any county in the State looking for assistance along these lines. Association with his fellow jewelers and his craftsmen of other cities broadens the retailer. He finds in the exchange of suggestions different methods of doing business, different ways of meeting trade evils and helpful methods in the conduct of his affairs. It is a good thing for the jewelers of any State to get together and rub shoulders with each other and find that their competitors are good fellows like themselves, and, also like themselves, are in business to make a living and have a perfect right to meet them in open competition. They have their troubles just like their neighbors. They have slow-pay customers and customers that never pay. They have to meet catalogue com-

petition. Together the jewelers of the different cities and towns of the same county and State can combat these evils with greater success, and in this way may be all working in harmony. Our Missouri friends from one end of the State to the other should try it.

Shortly after 8 o'clock the members and their guests began to gather. For about half an hour they passed the time fraternizing and after the exchange of fellowship the company, to the number of about 100, sat down to the dinner. The menu and some of the details of the banquet were not as elaborate as in former years, but what was lacking in this regard was more than compensated for by the good feeling that prevailed. The program of the evening was made up of extemporaneous addresses, music and vaudeville as announced in the invitations. The guests were called upon for short addresses—shop talk to be barred.

President Mauch called the company to order and acted as toastmaster for the evening, and he is certainly to be complimented upon the success of the entertainment, much of which was due to his efforts. He introduced as the first speaker Frank Y. Gladney, a member of the St. Louis bar, who devoted his remarks to the manufacturing interests of St. Louis and the State of Missouri. In the course of his remarks he showed that this grand old State was coming to the front by leaps and bounds in manufacturing.

F. W. Bierbaum, the veteran retailer, followed. He opened his remarks by saying that he had been a member of the association from its beginning and had attended every one of its banquets to his great pleasure and enjoyment. He promised that he never would miss any of them.

Charles N. Van Buren spoke in behalf of the trade press. He was followed by short talks by representatives of the wholesale and manufacturing trade, J. M. Friede, vice-president of the Eisenstadt Manufacturing Company, leading, who was followed by Ellsworth Bauman, of the L. Bauman Jewelry Company, and Joseph J. McKenna, of the Bauman-Massa Jewelry Company.

Frank W. Baier, the well-known retailer and a former president of the association, gave an interesting talk. He was followed by Adolph Rosenthal, of New York, the only traveling man present, and by Louis Gutfreund and George G. Gambrell, of the Eisenstadt Company, who expressed their pleasure at being among the happy company. George R. Stumpf, "the jolly jeweler," from Franklin Avenue, told of his experiences at Niagara Falls and Detroit in a humorous vein, provoking much fun for the guests.

The jolly evening wound up by the singing of "Auld Lang Syne."

The committees in charge were as follows: Banquet Committee.—Otto Steiner, Ed. Bohle, Geo. Eckhardt, W. F. Kemper, H. Mauch.

Reception Committee.—O. H. Kortkamp, F. W. Baier, John Schmidt, Geo. Hess, Aug. Kurtzenborn, Wm. Mauch, F. W. Bierbaum, J. F. Zeitler, Jos. Ebbeling, F. W. Drosten, Hy. Lowenstein, Al. Gerne.

The function was conceded by all to be a pronounced success and will help greatly in cultivating the *esprit de corps* so necessary to effective organization. The next banquet will no doubt find a much larger membership recruited from all parts of the State.

North Dakota Jewelers Organize

The North Dakota Retail Jewelers' Association was organized at Fargo, February 21st, and great credit is due to A. O. Wold, of Langdon, and others, whose energetic efforts brought together such a goodly attendance of the representative jewelers of the State.

At the morning session A. O. Wold was appointed temporary chairman and W. R. Bleakley, temporary secretary. Mr. Wold explained the objects of the association and outlined the good that could be accomplished for the retail trade through organized effort.

On motion the chairman appointed the following committee of five to draft a Constitution and By-Laws: B. F. Lavalley, George K. Munro, C. E. Tillson, E. P. Sundberg and A. G. Foogman. The rest of the forenoon was taken up with a discussion of trade topics and means that could be devised for the elevation and improvement of the retail jewelry trade.

At the afternoon session the Committee on Constitution and By-Laws made their report, which was adopted as read. We cannot now publish the Constitution in full but print the first two sections, as follows, which embrace the name and objects:

SECTION 1. This organization shall be known as the North Dakota Retail Jewelers' Association; a branch of The American Retail Jewelers' Association.

SECT. 2. The object of this association shall be: 1st. To supplement the American Retail Jewelers' Association. 2d. To develop a fraternal feeling among the jewelers of this State. 3d. To endeavor to do away with the petty jealousies that exist among the retail trade who are legitimate competitors of each other. It is the belief of this organization of retail jewelers that they can do a great good for one another by being friendly with their competitors and by treating each other with dignity and respect. Such a feeling developed on the part of retail jewelers will aid in a great measure to stop price cutting and other disagreeable features of the retail trade.

The following officers were elected for the ensuing year: President, E. P. Sundberg,



President E. P. Sundberg

Fargo; vice-president, George K. Munro, Grand Forks; secretary-treasurer, C. E. Tillson, Carrington; members of the executive committee, C. G. Conyne, Mandan, and A. F. Foogman, Hillsboro.

It was moved, seconded and adopted that all jewelers joining the association before July 1st shall have their membership fees remitted.

It was decided to hold the annual convention in January of each year and to co-operate with the Optical Society of the State, as most of the jewelers are opticians.

E. P. Sundberg, of Fargo, N. D., president of the North Dakota Jewelers' Association, was born in Sweden forty-eight years ago and came to America in 1870. He lived on a farm near Red Wing, Minn., for two years and afterward served an apprenticeship to the watch-making business with Myers & Finch, St. Paul, Minn. He subsequently worked in the employ of the Elgin National Watch Company, at Elgin, Ill., and in 1879 accepted a position with A. Hardy, of Fargo, N. D. Within two years he purchased this business outright and has since been its sole proprietor. He graduated from Dr. Martin's Ophthalmic College and Hospital, Chicago, and is an optometrist of experience and skill. He possesses an excellent optical outfit and does his own lens grinding. He is a consistent organizer and was one of the first to inaugurate the movement in his section.

C. E. Tillson, of the Tillson Jewelry Company, Carrington, N. D., the new secretary-treasurer of the North Dakota Jewelers' Association, is a "New Yorker" by birth but a



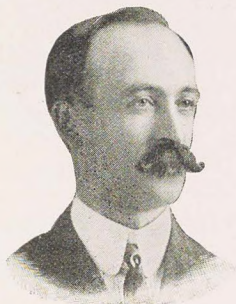
C. E. Tillson

"Westerner" by adoption. He began in the jewelry business with S. W. Gray, Fort Dodge, Iowa, in 1882, and from there he removed to Carrington, where he has established a lucrative trade. Altogether he has had an experience of twenty-four years in the retail business, which should serve him well in his new executive capacity. Many years ago he took up the study of optics and is an optometrist of the progressive type, who heartily believes in education and organization. He is fortunate in having the valuable advice and assistance of his wife in his business undertakings—Mrs. Tillson being a genial and accomplished helpmate, who conducts the china, fancy goods and novelty department in the firm's store.

Annual Meeting of the Minnesota Retail Jewelers' Association

The second annual meeting of the Minnesota Retail Jewelers' Association was held at the Commercial Club Parlors, St. Paul, Minn., February 27th and 28th, and its success evidenced the real interest taken in association work by the members. The attendance was the best so far, and great enthusiasm prevailed. The good results are now becoming apparent and the association's methods of handling important questions are worthy of being copied by other similar organizations. The members plainly showed in their arguments that it is no "one man's association" and that each step must be shown to be right and just before it is taken. The feeling so often seen in the past at other Jewelers' Association meetings of a desire for rabid enactments and demands was not in evidence

at all. "Fair play" seemed to be the motto and that golden rule "Do unto others as you would be done by" was manifestly the basis of action, and yet there was no hesitancy when a step was taken to take it boldly, its justice being es-



A. E. Paegel

established beforehand. It was the kind of a gathering that would enthrall everyone attending and, as one gentleman visitor described it, "The most level-headed gathering of jewelers I have ever seen."

The following new members were elected: A. Swenningsen, Moorhead, Minn.; W. J. Hall, Irwin, S. D.; M. G. Van Loan, Spring Valley, Minn.; C. Clausen, Fertile, Minn.; R. S. Swarthout, Pine Island, Minn.; G. A. Klein, Duluth, Minn.; W. A. Persey, Washburn, N. D.; E. H. Beatty, Brookings, S. D.; John B. Erd, Duluth, Minn.; E. M. Schwenke, New Richland, Minn.; G. R. Simons, Langford, S. D.; F. C. Robins, Benson, Minn.; J. H. Mosher, Akely, Minn.; J. E. Seagren, Cannon Falls, Minn.; W. G. Gould, Glencoe, Minn.; John Rosendahl, Mapleton, Minn. The resignation of B. Petterson, Montevideo, Minn., was accepted, as he stated he had sold his business and was no longer a jeweler.

The following resolutions were adopted and ordered sent to several jobbers:

WHEREAS, It has come to our certain knowledge that many of the wholesale jewelers of Chicago and other cities are in the habit of sending circulars, etc., containing and quoting net price lists by open mail.

AND WHEREAS, The retail jewelers of Minnesota believe such methods to be detrimental to their interests, therefore, be it

RESOLVED, That we, members of the Retail Jewelers' Association of Minnesota, in convention assembled, do hereby express our disapproval of such practice, and

Be it further resolved, That we respectfully request that all such catalogues, circulars or other matter containing prices be printed according to "Keystone" or code key, and,

Be it further resolved, That we request that all circulars and other matter containing or quoting net prices be sent by sealed mail only.

The financial report of the association shows: Receipts, \$283.45; disbursements, \$134.00; balance on hand, \$149.45.

The report of the Grievance Committee was read, and their action approved.

On motion the secretary was instructed to write to J. A. Wright & Co., extending the thanks of the association for their stand regarding the retail price of their product.

The association then endorsed the minimum price list submitted by the State Association of Optometrists.

The president was empowered to appoint a committee of five to prepare a minimum price list for repairing watches and report at next meeting.

The secretary was also instructed to prepare a list of all retail jewelers in the State, with a star in front of each member's name, and to send a copy of the list to each member.

A vote of thanks was given President Paegel for his labors in getting up the souvenir program.

All of the old officials were re-elected for the ensuing year with the exception of E. A. Barker,

Minneapolis, who was elected a member of the board of directors for three years.

A vote of thanks was tendered the officials for faithful performance of duties during the past year and also to the Commercial Club of St. Paul for the free use of their parlor for the meeting.

The subject of affiliation with the American Jewelers' Association of Detroit, was brought up by an address of W. B. Roberson, the official organizer, and after considerable discussion, in which it was brought out that no State association outside of Michigan was represented at the organization of the American Association; that it was a "corporation" and other matters needless to enumerate, it was decided that Mr. Roberson report to the American Association that the Minnesota body favored a National Association, organized in the regular way by delegates elected by the several State organizations.

The President announced the following committees. The first named in each case being chairman:

Assaying.—Wm. Plackner, Benson; J. C. Marx, Shakopee, and E. M. Schwenke, New Richland.

Grievance.—I. M. Radabaugh, Hastings; I. Reiner, Hutchinson; J. C. Herdliska, Princeton; L. W. Mowry, Stillwater and Geo. H. Lang, Mankato.

Finance.—F. H. Straub, Fergus Falls; J. D. Lifquist, Henning and D. G. Gallet, Aberdeen, S. D.

Membership.—W. G. Gould, Glencoe; J. H. Reiner, Glencoe and A. Swenningsen, Moorhead.

Entertainment.—A. E. Barker, Minneapolis; E. Geist, St. Paul and Geo. H. Lang, Mankato.

Legislative.—E. Geist, St. Paul; E. A. Barker, Minneapolis and Thos. Gaskell, St. Paul.

Minimum Price List.—Geo. H. Lang, Mankato; Emil Geist, St. Paul; Wm. M. Stone and Chas. Olson, Minneapolis and John B. Erd, Duluth.

The fixing of the date of the Semi-Annual Meeting was left with the Board of Directors, who will confer with the Directors of the State Association of Optometrists with a view to holding the conventions at the same time and place.

As it was impossible to get a complete list of those in attendance it was suggested that a register book be kept and each one register his name, thus enabling the association to know just who have been in attendance. The following were noticed at the meeting: A. Paegel, Minneapolis; Geo. H. Lang, Mankato; J. C. Herdliska, Princeton; I. M. Radabaugh, Hastings; F. W. Harper, Renville; F. H. Straub, Fergus Falls; J. D. Lifquist, Henning; E. Geist, St. Paul; E. M. Schwenke, New Richland; L. W. Mowry, Stillwater; John Rentz, Minneapolis; F. C. Wittenberg, Luverne; John C. Marx, Shakopee; I. Reiner, Hutchinson; E. P. Long, St. Cloud; A. E. Barker, Minneapolis; B. A. Benson, Glenwood; John Rosendahl, Mapleton; E. L. Wentworth, Kasson; W. G. Gould, Glencoe; Thos. Gaskell, St. Paul; W. C. Krueger, North Branch; Ove Hoegh, Spring Grove; A. Swenningsen, Moorhead; Wm. Plackner, Benson; J. H. Reinecke, Minneapolis; Geo. T. Hartmann, St. Paul; F. W. Seaman, St. Croix Falls, Wis.; G. R. Simons, Langford, S. D.; W. M. Robeson, Detroit, Mich.; H. C. Carpenter, South Bend, Ind.; W. J. Iliffe, Dickinson, N. D.; J. E. Seagren, Cannon Falls, Minn.

Notes by the Wayside

Several of the older and most enthusiastic members were missed from their accustomed places, noticeably Brothers Chalmers, Lake City; Williams, of Zumbrota; Mahler, of Le Sueur; Willman, of Stillwater.

There was a decided expression of sentiment against anyone using the valuable time of the association to present through a "missionary" any line of manufactures at the meetings.

Minnesota now has several members in South Dakota, which has no organization. Why not organize a South Dakota association at the Twin Cities this summer, which seems a more central point and easier reached than any point in South Dakota? Minnesota is willing to stand sponsor and North Dakota will assist.



Best Quality Glass

Office and Factory, *Honesdale, Pa.*New York Salesroom—
25 W. Broadway
FRANK MILLER, Representative

Artistic Designs and Brilliant Finish

No Pressed Blanks Used

New Patterns for 1906

THE COMB HOUSE

We manufacture a complete line of

Fine Mounted Combs in 14 K.,
10 K., Sterling, Gilt and Gold Filled.

Also, all kinds of

Plain, Real and Imitation Tortoise
Shell Combs*Selection Packages Sent to Responsible Jewelers*

Wagner Manufacturing Co.

41 Union Square, New York

Repair Work a Specialty

Factory, Lorimer St. and Throop Ave.
Brooklyn, N. Y.

We are now over the inconvenience occasioned by the recent fire in our factory and in a position to fill orders promptly. We are grateful for the consideration shown us by the trade, and glad to be in a position again to extend our usual service.

KELLY & STEINMAN

MANUFACTURERS OF

RICH CUT GLASS WARE

WE MAKE ONLY THE BEST

OFFICE AND FACTORY
HONESDALE, PA.

PRIZE CUP 236

L. A. Littlefield Silver Co.

Makers of

High-Grade Silver-Plated Hollowware

Trophy Cups

in English Pewter
Solid Copper with Pewter trimmings
and Silver Plate

Office and Factory, NEW BEDFORD, MASS.



CUP 220

UNIFORM PRICE-LIST OF REPAIRS

In connection with our editorial on page 567 of this issue we publish herewith the price-list of repairs compiled and issued by the American Horological Society :

	AMERICAN			SWISS		ENGLISH	
	* Ordinary	Mediu	Fine	Medium	Fine	Ordinary	Fine
Arbors, Balance	\$1 50	\$2 50	\$3 00 to 5 00	\$2 50	\$5 00 to 10 00	\$2 50	\$5 00 to 10 00
Arbors, Barrel	1 00	1 50	2 50	2 00	5 00 to 10 00	2 00	5 00
Arbors, Center	1 50	2 50	3 00 to 5 00	2 50	5 00 to 10 00	2 50	5 00 to 10 00
Arbors, Pallet	1 00	2 00	2 00 to 4 00	1 50	3 00 to 5 00	1 50	3 00 to 5 00
Balances	1 50	2 50	5 00	1 50	5 00	1 50	5 00
Barrels	1 50	2 50	2 50	2 50	5 00	2 50	5 00
Bushings	50	50	50	50	50	50	50
Caps, Ratchet	50	75	1 00	1 00	1 00	2 00	
Cleaning	1 00	1 50	2 50 to 5 00	1 50	3 00	2 50	5 00
Clicks	50	1 00	2 50	1 00	2 50	1 00	2 50
Cylinders				2 50	3 50		
Demagnetizing	1 00	1 50	5 00	1 00	5 00	1 00	5 00
Dials, Plain, Genuine	1 50	2 00	3 50	1 50	3 00 to 5 00	1 50	3 00 to 5 00
Dials, Fancy, Genuine	2 50	2 50	3 00	Made to Order		Made to Order	
Dials, Fancy, Imitation	1 50	2 00	2 50	Made to Order		Made to Order	
Glasses, Hunting	25	25	25	25	25	25	25
Glasses, O. F. Mi CC	40	40	40	40	40	40	40
Glasses, Extra Thick and Lentille, O. F.	50	50	50	50	50	50	50
Hands, Single—Steel and Gilt	25	35	50	25	50	25	50
Hands, Gold	50	50	50	50	50	50	50
Hooks, Barrels	50	50	50	50	50	50	50
Jewels, Balance Hole	1 00	1 50	2 00 to 3 00	1 00	2 00	1 00	2 00
Jewels, Balance Cap	50	1 00	1 50	50	1 50	75	1 50 to 3 00
Jewels, Plate	1 00	1 50	2 00 to 3 00	1 00	1 50 to 3 00	1 00	2 00 to 3 00
Jewels, Pallet, each	1 00	1 50	2 00	1 00	1 50 to 3 00	1 50	2 00 to 3 00
Jewels, Roller	50	1 00	1 50	1 00	1 50	1 00	1 50
Jewels, Center			2 50	Made to Order		Made to Order	
Pallet, Fork and Arbor	1 50	2 50	3 00 to 5 00	Made to Order		Made to Order	
Pinions, Center	1 50	2 00	3 00	2 50	5 00	2 50	5 00
Pinions, Cannon	50	1 00	2 00	1 00	2 00	1 00	2 00
Pinions, Third, Fourth and Escape	1 00	1 50	2 50 to 5 00	1 50	2 50 to 3 00	1 50	2 50 to 5 00
Pivots	1 00	1 00		1 00	1 50	1 00	1 50
Rachets	50	75	1 50	1 00	2 50	1 50	2 50
Regulators	1 00	1 50	2 50	1 50	2 50	1 50	2 50
Roller Table	1 00	1 50	2 00	1 50	3 00	1 50	3 00
Screws	25	25	25 to 50	25	25 to 50	25	25 to 50
Springs, Balance, Flat	1 00			1 50		2 00	
Springs, Balance, Breguet		2 50	5 00		2 50 to 5 00		5 00
Springs, Main	1 00	1 50	2 00 to 3 00	1 50	2 00 to 3 00	2 00	3 00 to 5 00
Squares, Center	50	50	1 00	1 00	2 00		
Wheels, Center	1 00	1 50	2 00	1 50	2 50	2 00	2 50
Wheels, Third and Fourth	75	1 50	2 00 to 3 00	1 00	2 00 to 5 00	1 00	2 00 to 5 00
Wheels, Escape	75	1 50	2 00 to 5 00	1 50	3 00 to 5 00	1 50	2 50
Wheels, Dial	75	1 00	1 50	75	1 50	75	1 50

REPAIRS ON NEW ENGLAND WATCHES

Series	S	Z	O	A	L-G-P	H-N-W	K	J	I
Arbors, Balance	\$2 00	\$1 50-2 00	\$2 00	\$2 00	\$1 00	\$2 00	\$1 50	\$1 25	\$1 00
Arbors, Barrel	75	75	75	75	50	75	75	50	50
Arbors, Winding, with Setting Pinion	50	50	50	50	50	50	50	50	25
Crowns, Nickel, Silver, Gold Filled	50-75	50-75	50-75	1 00	25-75	50-75	50-75	25-75	25-75
Barrels	1 00	1 00	1 00	1 00	75	1 00	75	50	50
Cleaning	1 00	1 00	1 00	1 00	75	1 00	75	75	75
Clicks	50	50	50	50	50	50	50	50	50
Dials, Plain	1 00	75	1 00	1 00	75	1 00	75	75	75
Dials, Fancy	2 50	1 50-2 00	1 50-2 00	1 50-2 50	1 50	1 50			
Hands, Steel, Gilt	25	25	25	25	25	25	25	25	25
Jewels	75	75	75	1 00	75	75	75	75	50
Rachets	50	50	50	50	50	50	50	50	50
Regulators	50	50	50	50	50	50	50	50	50
Screws	25	25	25	25	25	25	25	25	25
Springs, Balance	1 00	1 00	1 00	1 00	75	1 00	1 00	75	75
Springs, Main	1 00	1 00	1 00	1 00	75-1 00	1 00	75	75	75
Wheels, with Pinions	75	75	75	75	75	75	75	75	50
Wheels, Minute	50	50	50	50		50	50		
Wheels, Escape	75	75	75	75	50-75	75	75	50	50

REPAIRING WATCH CASES

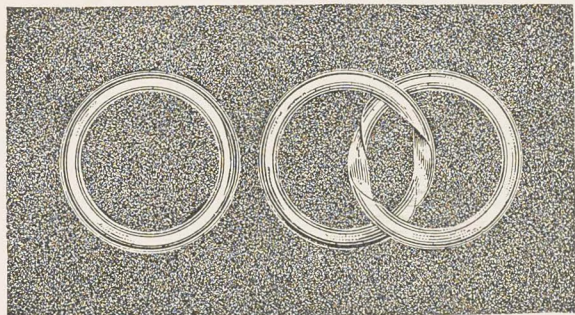
Joints, Silver	\$1 00 to 2 50	Pendant Bows, Gold	\$2 00 to 4 00
Joints, Gold	1 50 to 3 00	Pendant Bows, Nickel	50
Pendant Bows, Silver	1 00	Stems and Sleeves, Gold, Silver, Nickel and Swiss	1 00 to 3 00
Pendant Bows, Filled	1 00 to 2 50	Crowns	50 to 2 50
Springs, Lift, Ordinary	1 00	Springs, Catch, Ordinary	1 25
Springs, Lift, Fine	1 50	Springs, Catch, Fine	2 50

CLOCK REPAIRING

	American	French	Grandfather and	French Portable Clocks
	Common	Medium	Hall Clocks	Time, Strike or Repeat
Cleaning	\$0 50 to \$1 50	\$2 50	\$4 00 to \$5 00	\$5 00 to \$15 00
Mainsprings	1 00	1 50	2 00	2 50 to 5 00

*In the above price-list the definition of American watch movements under the various headings is as follows: Ordinary movements, costing wholesale up to \$2.50; medium from \$3.50 to \$7.00; fine, all above \$7.00.

Numerous inquiries have been made, Who makes



THE ALLIANCE RING?

Let us solve this question for you
WE DO!!!

The graceful style of the Alliance Ring is rapidly supplanting the use of the old-style wedding ring.

Its mysterious construction is another reason for its increased demand.

We have thus far supplied the entire demand, and we take these means to inform you that should you need them, we can supply you.

These rings are most carefully adjusted: the joints are barely perceptible, except by a magnifying glass.

Whenever engraving is desired, it is done in the inside flat surface. They are easily opened as shown on illustration by inserting a sharp instrument, for instance a pin, in the inside pin hole.

They should not be pried open, as this would destroy their adjustment.

14 karat, 3 dwts., each, \$1.25 per dwt.; in dozen lots, \$1.10 per dwt., net
18 karat, 3 dwts., \$1.40 per dwt.; in dozen lots, \$1.25 per dwt., net

LEONARD KROWER, Manufacturing Jeweler

536-538 Canal Street

New Orleans, La.

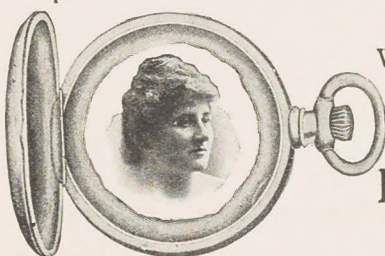
MINIATURE PORTRAITS

ON

Watches, Dials, Brooches and Locketts

COPIED FROM ANY PHOTO.

Our work will not fade or peel off



**Hand-Painted Miniatures
Copied From Any Photo.**

We make a Specialty of this High-Grade Hand-Painting on Ivory
PERFECT LIKENESS GUARANTEED

The Goldstein Engraving Co., 45 Maiden Lane, NEW YORK

Landis School of Engraving

SPRING COURSE



M. L. Landis
Proprietor and Instructor

If you wish to take a course this Spring, please **WRITE US AT ONCE** and we will assign and hold a place for you.

We do not accept more than twelve pupils at one time, devoting our entire time to their personal instruction and Advancement.

Our methods are original and entirely new. We are the founders of a New System in the Art of Cutting and Designing, which enables a pupil, not endowed with artistic skill, to learn to make perfect letters.

Write us, and we will give you an idea of what you could accomplish by taking a Course with us.

M. L. LANDIS, 119 Mt. Vernon Avenue, Detroit, Mich.

NOTE NEW NAME OF STREET

SIGNET=
LOCKET
RINGS
for
PHOTOS

AN EXCLUSIVE LINE OF RINGS



No. 1753 Open



No. 1751 Open



No. 1751 Half Closed

Write for the Fifth Edition
CATALOGUE
containing Illustrations of new and
salable Rings and Locketts

Pacific Coast Representatives
A. EISENBERG & CO.
126 Kearny St., San Francisco, Cal.

CHARLES M. LEVY

Manufacturer of

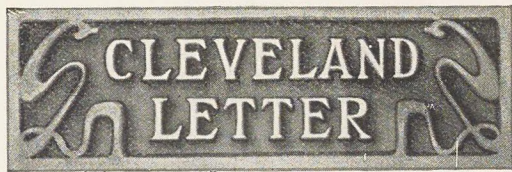
FINE GOLD RINGS AND DIAMOND LOCKETS

90 William St., NEW YORK

Interchangeable
Encrusted Initial and
Emblem Rings

(Patented Nov. 27, 1900)





March has been unusually quiet for the jewelry trade. Easter comes too late this year to give the usual stimulus to this month's business, and the usual spring crop of weddings are too late to be foreshadowed in the March showing. The weather has been very unfavorable, too. We are having all of our winter weather this month. In fact, the winter was so mild that navigation opened on the great lakes about the first of March, but now the lakes are full of ice and snow. Local manufacturers are hustling to accumulate a good supply of coal, though the possibility of a strike is growing more remote. It is well, however, to be prepared.

A. T. Hubbard, president of the Cowell & Hubbard Co., was called to the East the middle of the month by the death of his aged mother.

Geo. Scribner is still in Florida, and judging from the news items in one of the Florida papers, he must be enjoying some fine bass fishing. Mr. Loehr, who was also South, has returned.

Geo. Tipling, who for many years was with Sigler Bros. Co., has taken the city agency for the "Reo" automobile.

Allen Leonard, who for several years past has been assisting local jewelers in their engraving during their rush, has opened an office in the Superior Building for trade engraving. He reports a good business.

The Cowell & Hubbard Co. had on exhibition recently the pieces of bronze statuary given by the board of education and the newspapers of the city for prizes among the students of the public schools for contests in athletics.

Oakley D. Howland is again able to be out after an illness extending over two months. He has not as yet returned to the store, but hopes to have his strength back so as to take up his duties by the first of the month.

Chas. Ettinger has been in New York on business.

Sidney Farron, with the Scribner & Loehr Co., is now the father of a son born the first of the month.

Webb C. Ball has been on a visit to Chicago on business for his company.

W. L. Newmeyer, of this city, has recently opened a school for engraving and designing. Mr. Newmeyer has been for ten years at the head of this department for the Cowell & Hubbard Co., and was formerly connected in a similar capacity with Spaulding & Co. and Tiffany & Co. He is a master in his profession and will undoubtedly make a success of the venture.

Fred. Rensch, watchmaker for F. H. Kramer, Y. M. C. A. Building, has resigned and been succeeded by Fred. Grossenbacher, who for the past twenty-five years has been with Cowell & Hubbard Co.

Fred. Reiff has again joined the force of the Bowler & Burdick Co. Mr. Reiff has been ill for nearly a year, but has now recovered so as to be able to resume his position.

Chas. Krause, trade watchmaker, on Sheriff Street, has joined in partnership with a loan company, which has taken the corner store on Sheriff Street and Prospect Avenue.

H. A. Hutchinson and H. C. Meyers are the owners of a new jewelry store to open up about the first of the month in Massillon, Ohio.

L. Reigelman & Son, 351 E. Federal Street, Youngstown, Ohio, had his show window smashed, about the first of the month. The thieves got about twenty-five watches.

M. U. Basinger, Lima, Ohio, was in town last month on a business trip.

C. W. Bechtol, Galion, Ohio, was a trade visitor the middle of the month.

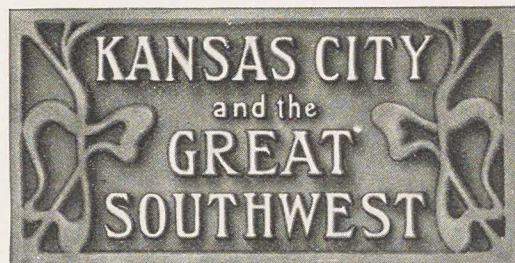
B. W. Andrews & Bro. have purchased the stock and good-will of A. T. Breese, Mount Gilead, Ohio, and will continue the business at the old stand.

F. H. Bredbeck, Port Clinton, Ohio, has sold out his stock and store.

Wm. Walcott, Toledo, Ohio, has recently signed a lease for a new store in a new building, corner Superior and Madison Streets. Mr. Walcott does not expect to get into his new store for another year.

Mr. Wilcox, of Hibbard & Wilcox, Akron, Ohio, was in town last month on business.

Trade callers here this month included the following Ohio jewelers: W. H. Deuble, Canton; Geo. F. High, Medina; A. J. Miller, Massillon; Fred. Ganz, Alliance; Ed. Critz, Elyria; J. O. McClintock, Chagrin Falls; Frank Elgin, of Ewing & Elgin, Kent.



Kansas City is starting out on its spring season with splendid indications for good trade. Business with both wholesale and retail jewelers has been rather quiet for some time, but nearly all of them look upon the lull as making business to be gathered in later. During this dull season every house appears to have held its own, and many show an increase in business over the corresponding month last year. There have not been many out-of-town jewelers in during the past few weeks, but the traveling men are all out and sending in orders with a persistence that shows that Kansas City is still climbing along as a wholesale center. Collections are good. About the middle of March Kansas City and its tributary territory was visited with a "spell of weather," which for the time being seemed unduly severe, but which fulfilled the very valuable purpose of investing the wheat fields with a blanket of snow which will be harvested in the form of jingling dollars later in the season. The snow was just the thing that the wheat crop needed, and though it came at a time when most big snows have taken their leave, it was none the less welcome to all branches of trade that owe their prosperity or lack of it to the condition of crops. There is one little item of jewelry that keeps up its vogue undiminished by the quiet times. That is the bracelet, whether plain or fancy. Short sleeves and long gloves have meant more bracelets, and jewelry firms, whose trade has practically stood still during the last few weeks, have had unremitting "bracelet business." The armlet fad will bring up the total of many a traveling man's order book for the spring trade.

L. S. Cady, who has been in California all winter, is expected home this month.

J. R. Mercer and Mrs. Mercer are in Marlin, Texas. They will go to Corpus Christi, before returning, in about four weeks.

C. L. Merry, who has been visiting his Memphis store, is now in New York.

Dr. S. W. Lane has recovered from his long and dangerous illness, and is once more directing his work in the Southwestern Optical College.

George H. Edwards, of the Edwards & Sloane Company, has taken a plunge into politics and is running for the upper house of the city council on the Republican ticket. N. R. Fuller, of the same firm, says that Mr. Edwards running for office is a similar case with the Swede who attended a revival meeting. Upon being asked if he didn't want to work for the Lord, he replied, "Naw, aye got a yob alretty!" The fact that Mr. Edwards has a "yob alretty" will not interfere with his making just the sort of alderman that Kansas City needs.

W. H. Haupt, of Bartlesville, Ind. Ter., bought goods in Kansas City last week.

Among the new matriculates at the Southwestern Optical College are J. A. Lukens, Bucklin, Kans.; N. Bamford, Creighton, Nebr.; J. F. Hibbard, Amsterdam, Mo.; Charles P. Martin, Wheeling, West Va.; W. S. Hancock, Kansas City, Mo.; Leroy Hughes, Independence, Mo.; E. F. Perkins, Tecumseh, Nebr.; Mrs. Frances W. Norvell, Stuttgart, Ark.; A. L. Wilson, Topeka, Kans.

E. Hochstetler, of Garden City, Mo., was a visitor to the Kansas City wholesale houses last month.

Among the out-of-town jewelers who were in Kansas City recently were George W. Lewis, Hering, Kans.; Roy Smithers, Cameron, Mo.; R. A. Nichols, Lebanon, Mo.

The Kansas City Horological and Optical School has quite a large class at present. W. H. Adams, a graduate, has opened a new jewelry store at Sulphur, Ind. Ter.; C. L. Carter, also a graduate, has accepted a position with the Kauffman Jewelry Co., of Leavenworth, Kans. Many improvements have recently been made in the school, and a new illustrated catalogue, just issued, will interest intending pupils of horology and optics.

His Only Teacher on Watch Work

ED. KEYSTONE:—This may not interest you nor many of your readers. I have taken THE KEYSTONE since 1891, and have cut out all the questions and answers that I wish to remember or refer to, and have put them in a scrap-book and indexed them, and I find it very handy as well as useful.

I started repairing watches in May, 1891. I am forty-two years old, and never worked as an apprentice, never saw a jeweler put a watch together, or work at a lathe. I bought a Geneva lathe, and in less than a month I pivoted and turned balance staffs. I went according to the "Lightning Pivoter" put out by THE KEYSTONE. I have turned all of my balance staffs until about two years ago. I buy them now, although I turn one now and then when I do not have one that will fit. There are jewelers in this county that say that I cannot do work of this kind, but I have never sent but two watch movements away to be repaired in all the fourteen years that I have worked at the business. I do not use cement chuck or cement to do so, either, just the wire chucks. Now, this I blame THE KEYSTONE for, and I would not do without it.

Yours very truly,

North Adams, Mich.

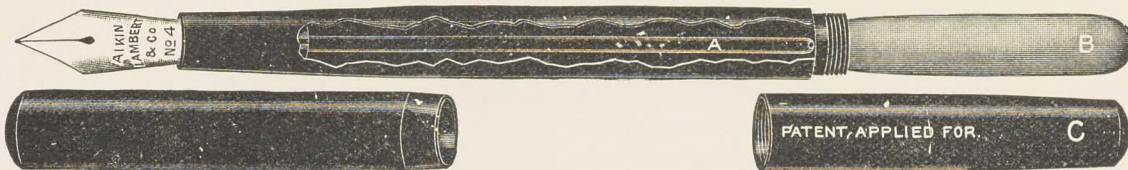
S. F. GREEN.

AIKIN, LAMBERT & CO.'S**Self-Filling Fountain Pen**

Retail 3A, \$3.00

4A, \$3.50

5A, \$4.50



We offer to the trade a new self-filling device in Fountain Pens that we believe for convenience, durability and simplicity to be the best yet invented for this purpose, and shall be pleased to furnish samples to dealers with prices and discounts.

It has no ink joint to soil fingers or clothing. Holds three times as much ink as any other self-filler. Ink is held in a hard rubber reservoir instead of soft rubber sack. Pressing the bulb expels the air and ink flows into the barrel.

NEW and GOOD*Mercantile Fountain Pen*

Made and fully guaranteed by

**AIKIN,
LAMBERT & CO.**

19 Maiden Lane

NEW YORK



WEDDING INVITATIONS

A most profitable line for you
to handle. Write for information
regarding sample sets.

WM. FREUND & SONS.

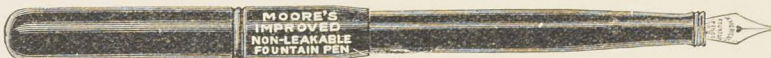
ENGRAVERS, PLATE PRINTERS AND EMBOSSERS
174-176 STATE ST. CHICAGO.

COMMENCEMENT INVITATIONS



THE "CLEAN-TO-HANDLE" FOUNTAIN PEN**Moore's Non-Leakable Fountain Pen**

Retail from \$2.50 up

**THE FOLLOWING CLAIMS WE GUARANTEE:**

1. That the pen is filled without unscrewing the section, thus avoiding soiling the fingers with ink when filling.
2. That the pen is drawn back into the barrel or reservoir after using, and when the cap is turned on is absolutely AIR and INK tight.
3. That it can be carried in any position in any pocket and cannot leak.
4. That the pen is always ready to write the instant it touches the paper.

Sectional View of Pen Closed for Carrying




These pens, being constructed upon entirely different principles from other fountain pens are, without doubt, the nearest perfection of any pens manufactured.

5. That the barrel being AIR-TIGHT, the ink never thickens or dries up, and if the pen is not used for a year, it writes just as readily.
6. That we have the ONLY desirable fountain pen IN THE MARKET for LADIES' USE.
7. That our "Tourist" or Military Pen is the best pen made for travelers' or military use.
8. That we use nothing but the highest grade gold pens.
9. That we use pure gum rubber, and the superior finish and luster of our holders is very noticeable when compared with others made from common stock.

American Fountain Pen Co.

Boston, Mass.

R. W. SPENCE, New York Agent, 152 Broadway
I. P. PATCH, Philadelphia Agent, 1029 Chestnut Street



JOHN HOLLAND FOUNTAIN PENS

Lately improved with a PATENTED FEEDING DEVICE

Also makers of
Gold Pens, Fine Pen Holders, Pencils,
Toothpicks, Thermometer Cases and Stylographic Pens.

THE JOHN HOLLAND GOLD PEN CO.
Established 1841

**THE SUCCESS
OF
THE
PEN
AGE**

127-129 E. Fourth St., CINCINNATI

**The "MODEL"
Fountain Pen**

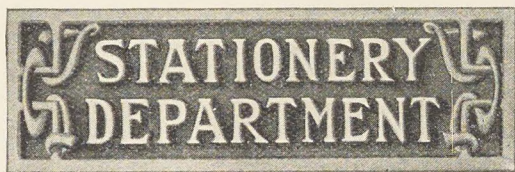
THE MODEL OF PERFECTION. Retail Price, \$1.00 to \$10.00. Made of finest grade rubber and fitted with a 14 K. Gold Pen. No extra charge for special imprint. Every pen guaranteed. Write for samples and prices. All makes repaired and returned same day received.

HERING & CO., 47 Ann Street, New YorkNo. 650
25 cents

Send for sheets showing advertising illustrations specially prepared for the
use of Jewelers and Opticians. Prices nominal

THE KEYSTONE PUBLISHING CO., 809-811-813 North 19th St., PHILADELPHIA, PA.

No. 669
35 cents



Latest Fads in Stationery

The very newest monogram for stationery is stamped on a disk of mother-of-pearl in silver or gold and set in an empire wreath to match. The paper used is of heavy, coarse-grained linen in very delicate pearl tints. The upper left-hand corner is the proper place for the monogram or crest just now, and every one is running huge letters. They are very long and narrow, and when stamped, one slightly above the other, the most modish method, they extend fully halfway down the sheet.

One thing in the new monogram's favor is that it is easily decipherable. Many of the out-of-date ones looked as much like the writing on Cleopatra's needle as the initials of an American woman.

Double envelopes are used for mourning. First the missive is put into a solid black envelope of a tough, fine texture, reminding one of an onion skin, and this goes into a white envelope with a broad band of black around it.

Dull gray stationery stamped in black is used by those in light or second mourning. It must strike mere man as odd that modern femininity should express degress of mourning in animate things, but she does, and those who know say that bereaved ones seem harder to please in the matter of stationery and cards than their more fortunate sisters.

The double envelopes in the most accepted tints are very attractive. For example, a very pale lilac has a lining of rich plum; an opalescent pink an inner envelope of rich rose; a delicate blue a sapphire lining, and so on in artistic harmony.

All paper for country use is plainly marked with the address, railroad station and telegraph and telephone stations of the owner.

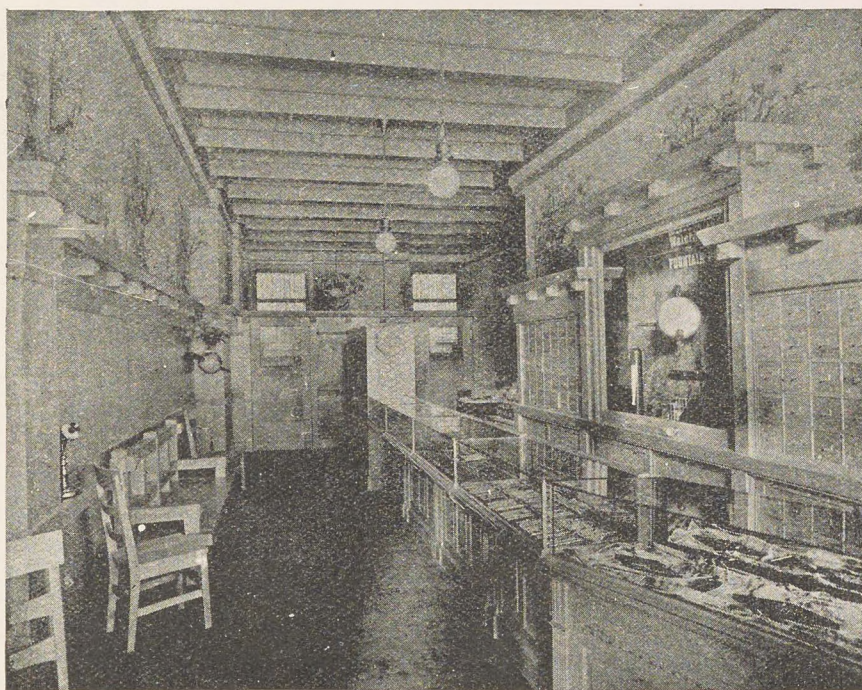
Germs Carried by Pencils

As an additional precaution against the spread of disease among the school children of the lower grades of the city, because of the distribution of germs through the medium

of the lead pencil doled out to the youngsters, an effort is being made to install holders for the pencils, which will serve as a means of identification of the pencils and prevent their being exchanged between the recipients.

It is the custom in the lower grade schools to give pencils to the children for use in their writing exercises and when these periods have expired the teacher again collects the pencils and they remain in her custody until they are next called into use.

While the pencils are in the possession of the children, the latter invariably place the points in their mouths for the purpose of wetting the lead, and many children have the habit of chewing the ends while thinking out



Interior view of new store of L. E. Waterman Co., San Francisco, Cal.

their exercises. When the pencils are gathered and again distributed it is impossible to give the pencil to the same scholar who used it on a former occasion. In this manner, it is argued, disease germs could quite easily be carried from child to child.

The new plan is to provide wooden holders for the pencils. These receptacles, as recommended, are about six inches in length and contain apertures large enough to receive the pencil. Space is reserved for the placing of the name of the owner thereon and the pencil used by each individual could thus be identified and returned to him when the pencils are again given out for use.

Anything which will aid in making the needful utensils of the school children more hygienic is to be encouraged, and the inventor's aid should be welcomed in the effort. The time-honored habit of moistening the pencil with the lips is difficult to suppress.

A Unique Store

Correspondence received during the past few weeks as a sequence to the article in our Easter number, entitled, "The Modern Jewelry Store," evidences widespread interest in the matter of store improvement. A new establishment, which well merits mention in any list of unique stores, and which has special interest for the jeweler-stationer, is the beautiful store recently opened at 18 Geary Street, San Francisco, Cal., by the L. E. Waterman Co., the well-known fountain pen manufacturers. The illustration here shown gives but a hint of the unique arrangement and fixturing of the interior. Around the entire salesroom is a wainscoting seven and one-third feet high composed of Oregon ash. The panels are the largest ever seen in the West, many of them measuring ten or twelve feet long by three feet wide without seam or joint and showing the large slash grain, while the remainder of the woodwork is of vertical ash, making the panels appear veritable pictures in wood. The color employed is a warm silver gray and makes a striking and pleasing change from the dark woods usually used. Above the wainscot is a fifty-two-inch frieze of pastoral design in soft grays and greens, imitating an old tapestry, while from between the beamed ceiling light is reflected by a delicate silver-shot Japanese grass-cloth paper also in a gray harmonizing with the general color scheme.

The furniture was made to order and is massive and in keeping with the Flemish character of the wainscot, while the show cases and cabinets are of the designs used in the Waterman Ideal pen stores in other cities. Back of the main salesroom is the office of F. A. Kenny, for many years the Western representative of the company, and opposite to this is a repair and workroom. The new store is lighted with Nernst electric lamps in ten-inch sanded glass globes suspended by handsome chain fixtures. All the furniture and cases are stained and waxed to match the woodwork, and the hardware is finished in French gray silver throughout, the doorknobs, sash-lifts and push-plates being of finest glass, with metal trimmings in keeping with the quiet taste shown elsewhere. Signs are few but elegant, and every accessory is in the most exquisite taste.

High-
Grade
Modern
Jewelry
Store
Fixtures
and
Show
Cases



One of the Many Jewelry Stores Designed and Furnished by us

Manufacturing
To Order
Our Specialty

State your wants

Estimates
cheerfully
furnished

ALEXANDER H. REVELL & CO., Manufacturers

Rees, Dayton, Eastman and Hawthorne Streets, CHICAGO, ILL.

Replenish Your Stock with the Popular **NEW COLLARETTES**
AND

STERLING AND GERMAN SILVER BAGS AND PURSES

We have these in sizes from 2 inches to 6 inches. ROMAN, SILVER, GUN METAL and OLD ENGLISH FINISH. WHITE KID LININGS

These bags have many meritorious points in style, construction and finish. The principle upon which they are made obviates rivets, and the tops are not drilled. Just as good is but a tribute to their superiority, and should be so understood. Our Bag is the best.

STERLING AND PLATE
BROOCHES

BEAD NECKS

BACK COMBS

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HAT PINS

SCARF PINS

NECK CHAINS

ETC.

Buckles

Bracelets

Bags

CIGARETTE CASES

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COIN HOLDERS

CIGAR CUTTERS

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KNIVES

SCISSORS

NOVELTIES

ETC.

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New York—Chas. Van Ness, 11 Maiden Lane

Western Representative—C. H. Davison

San Francisco—H. C. Van Ness & Co., 115 Kearny St.

The Traveling Man's Creed

I believe in the house I am with; in its soundness, its integrity, in the wisdom of its methods and in the goodness of its merchandise.

I believe in my trade; in its friendliness to my house, in its appreciation of our honesty, our methods and our ability to serve them.

I believe that being a representative of a house like ours is a privilege and gives me a right to the hearing that is afforded me by the trade on whom I call.

I believe that my house can and does offer as good merchandise to the trade as is offered on the market, and that we are in position to, and do, make as good prices on an equal quality of goods.

I believe that the interest of the firm is my interest—that I am best serving myself by serving them to the best that is in me.

I believe that our mutual interests are best served by giving "every man a square deal—no more, no less," and that this is the basis on which our dealings are figured.

I believe that there are other houses, with other traveling men and with other goods, but that none of them are better able, more prompt or more willing to serve the trade on the lines established by the Golden Rule.

I believe that I cannot know too much about the goods I have to sell; that there is no detail about them so small but that some time the knowledge of same will enable me to serve my house better.

I believe that I cannot know too much about my house, its methods and its systems; that the more familiar I am with them, the more readily I can adjust any differences that may arise, to the satisfaction of my customer and the credit of my house.

I believe that the men at the house are as vitally interested in anything that is liable to help our business as I am myself, and that they are all willing to accept and act on any suggestion advanced that promises to increase our mutual interests and enhance the standing of our house.

I believe that there is a good and sufficient cause for the turning down of some of the orders that I send in, and that it is not done because of any personal reason, but that it is for our best interests. For I realize that orders are too eagerly sought after to be refused without good reason.

I believe that I am directly responsible for the impression created with the people I call upon, and that the better that impression the better I am representing my house.

I believe that in any transaction the interests of my house are paramount, and must be looked after with the same care as though entirely my own. I really do not exist for myself, but as part of the machinery of the firm which is paying me for my services.

I believe in the necessity of harmony in the ranks, in the prompt and hearty support of every member of our business family, in the earnest endeavor to do the best I can, in a loyalty that permits of no question, in the efficiency of the management, in its friendliness to me and, above all, in the confidence I have that I am with a house

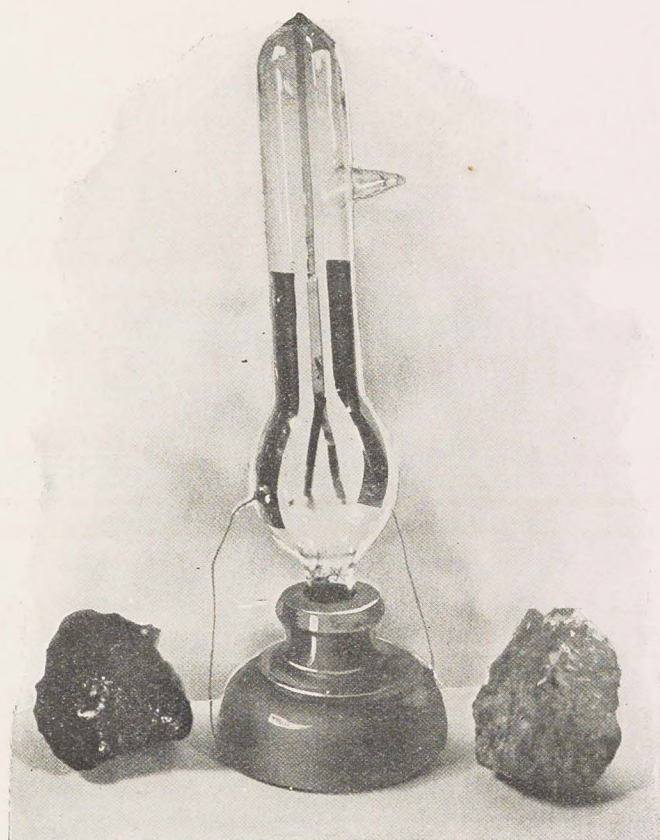
that will appreciate my efforts and support me in my trials.

I believe that all these things will conduce both to my personal happiness and success.

—*Implement Trade Journal.*

A Radium Clock

Some few months ago the Hon. R. J. Strutt gave an interesting lecture before one of the British royal societies on the negative rays emitted by radium, and exhibited a small model, by means of which he showed how the dissipation of these rays could be applied to a mechanical use. The demonstration was purely an experiment, but since then, however, the device has been perfected for commercial purposes. The outcome



The Strutt Radium Clock, which is Calculated to Run Twenty Thousand Years

of these perfections is the introduction upon the market by Mr. Martindale, a manufacturing chemist, of London, of a radium clock. This little device is fundamentally the same as the Hon. R. J. Strutt's experimental device, and it shows the dissipation of the negative rays emitted by radium. The instrument is very small, being inclosed in a mahogany frame measuring about six inches by four inches. There is a small glass tube in which is placed about one-twelfth of a grain of radium, and supported in an exhausted glass vessel by a rod of quartz. At the lower end of this tube is an electroscope, consisting of two aluminum leaves or films. The surface of the glass vessel is treated with phosphoric acid, to render it conductive.

At intervals of one minute, the silver leaves under the action of the radium, move apart and touch the sides of the glass vessel. This action is caused as follows: After the Beta rays are carried away, the positive charge which is left behind is passed on to these two leaves. Under this stimulus they expand until one of them touches the side of the glass vessel. This contact causes

the charge to be conveyed to the earth. The leaf then falls back to its original position by gravitation, when the cycle of operations is once more repeated, and continued until the circuit is broken. Owing to the constant and exact regularity of the movement, the instrument resolves itself into a clock which will act incessantly if untouched, until wear is exhibited by the moving parts. The life, however, is estimated at several thousand years. Once set in motion, the instrument requires no attention whatever, and its time-keeping qualities are infallible.

If a coherer, similar to those in wireless telegraphy, is introduced, the clock can be made to ring an electric bell at every discharge, the current being transmitted to the bell through aluminium wires. One of these delicate instruments, which are obtainable for fifty dollars, was recently brought to this country.

—*Scientific American.*

Shop Shots

A bargain sale will not go off better for the making of the goods to look cheap. Make the goods look their best—worth every cent you can; then make the price look cheap.

The children are your most discerning customers. Every child well treated means a grown-up friend for your store.

Many a clerk has made customers for the store by being possessed of patience unlimited. Patience is to salesmanship what oil is to an axle.

If your clerks do not exercise patience in serving customers, do not lose your patience in trying to teach them the virtue.

The clerks who co-operate with the management toward the making of the successful store are the clerks toward whose advancement the management will co-operate. Success is the fruit of co-operation and reciprocity.

Lots of young fellows go into a store to work with the notion that from that time they own half the store. It's a mighty good thing for any man to keep a pretty sharp line drawn in his mind between "mine and thine."

Study the store windows in the nearest large city to you. If you have no business that takes you to the business centers, make it your business to go for the purpose of studying store windows.

You may be as full of ideas as an egg is of meat, and yet the other fellow will think of things that never occurred to you. Study the methods of every live merchant whose business is within reach.

The window is the illustrated supplement of the store. In it are pictured the best things the store has to offer arranged in the best possible style. Everyone likes to look at the supplement if it is a good one.

The clerk who gets grouchy when asked to do something a little out of his regular work—something "he wasn't hired to do"—is likely to find his employers rather slow in raising his wages for doing just so much.

You can spot the cigarette clerk as far as you can see him. He belongs in the "Quitter" class and isn't capable of struggling with anything or anybody. He is in the hands of fate.

"Higher Prices for Watch Work"



is the new slogan of the trade. This will mean higher wages for skilled watchmakers.

The advantage of our school is that its graduates can start with the very *highest* wages, their competency being recognized by all employers.

Our system ensures such thorough mastery in every branch of watch work that each student has his

Choice of Well-Paid Positions

when his course is completed.

We guarantee the same thoroughness in **ENGRAVING** and **OPTICS**, and never has there been such tempting offers for workers in these specialties.

If you have mechanical ability and ambition, write for our prospectus. It costs nothing and will point the way to a prosperous future. Our graduates are holding responsible positions in every state and city in the Union.

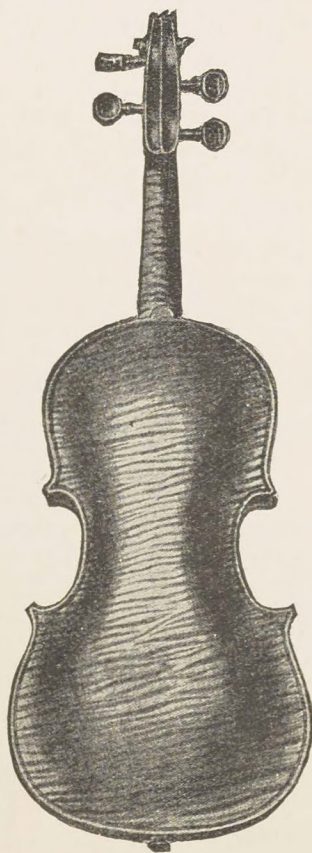
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Broad and Somerset Streets, Philadelphia, Pa.

Established 1894

F. W. SCHULER, Principal

DO YOU WISH TO INCREASE YOUR INCOME?



We can tell you how it can be done with but little expense or effort on your part. You will find that a well-selected line of musical instruments will add to the attractiveness of your store. If you have the celebrated

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Violins, Bows, Strings, etc., you will find that your musical friends know at once of their high standing. Artists prefer them.

Then we have all kinds of Accordeons, Mandolins, Guitars and Harmonicas, at lesser prices, but which are superior to any on the market at the same price.

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Thoroughness

BY JOHN TWEEZER

An old farmer came to the counter, laid his broken watch chain on the show case and said to the jeweler,

"I wish you'd mend this chain for me an' have it ready so I can get it next market-day. *Make a good job of it*—I'm particular about such things. Just yesterday I fired my hired man because he seemed to think a thing was done enough when it *just did*; but I like things done *right*."

The world at large takes the farmer's view. *Thoroughness* is everywhere recognized and rewarded. There is no surer road to success than the gaining of a reputation for doing *well* that which you attempt to do at all. Slipshod ways or methods never "win out" in the long run. The world hates half-measures and half-men. When it can *absolutely depend* upon one to "make a good job of it"—whether that job is sweeping and dusting a store, or polishing a pivot, or writing an advertisement, or financing a business, or managing an enterprise—it opens a path for that one through the crowd. It helps him to "get there."

Never mind about the *kind* of your work—it is the *quality* of work you do that counts. There is no position so low or mean but affords room to demonstrate your thoroughness in that particular position; and some observing one will soon be beckoning to you to step higher. There's such an appalling number of boys and men who are incapable or unwilling to do a thing *well* that those who *can* will not escape notice. Inattention, indifference, half-heartedness and laziness enter into the mental composition of thousands of imbeciles who "think a thing is done enough when it *just does*," like the old farmer's hired man. It isn't book-learning that most boys need as much as a determination to cheerfully catch hold and lift, while studying how to get a better hold and lift higher. They will get the book-learning, too, if they possess the determined will which catches hold and lifts.

It is as true of the man as the boy. The jeweler who does business in a haphazard way, who does not go into details yet does not study out the larger questions of trade, who dozes and drifts from day to day, who turns out jobs that will "just do" and buys and sells and finances and manages in any old way, has small chance against the keen competitor who is *thorough* in every thing that engages his mind or his hand.

The need of thorough *preparation* is greater with every year of this bustling world's increasing activities. The world is daily setting higher standards of conduct,

output, achievement. The slipshod who might have covered ground yesterday is side-tracked in the swifter pace of to-day. It is most important that the beginner, in these days, begins with certain fundamental determinations, chief of which is to be thorough "in all that his hand findeth to do." Every other quality, outside of honesty and truthfulness, must stand aside for the development of this supreme virtue. He may be slow, yet will be forgiven if he be thorough; if he be *not* thorough, his speed will only multiply his fault and hasten his undoing.

No doubt many unfortunates are "born so;" no doubt many acquire slipshod ways through neglect of their early training. But it is entirely possible, even for the matured man, to correct his habits of indifference and so change about to the practice of thoroughness in all his undertakings. The time to commence is NOW. The instant reward will justify the turnover of habit.

Thoroughness is not expressed only in *work*; there is a thoroughness in *thinking out*, as well. I know a jeweler who decided to drop a certain line of exclusive goods on the instant that the door closed upon a customer who had just shown him a defect in an article she had bought the day before; and he at once sat down to countermand a large order which he had given only a few hours before, and told the manufacturer he would no longer handle the line. The exclusive line was offered to his competitor and eagerly accepted; and the first jeweler soon realized that he had not *thoroughly thought out* the proposition. He had not considered that even the most careful factory inspection cannot discover every possible fault; he had not weighed the consequences of discontinuing the sale of a line of goods which other dealers were hungering to get. His intellectual dough was only half-baked, and he suffered financial indigestion in consequence.

So, do *well* what you attempt to do at all. If your capacity is limited, learn to do *one thing* well: concentrate your powers in one direction until you are perfect in that one thing. In the vast mass of "middling good" workmen and clerks and managers and merchants, the man who is thorough stands out as a beacon set upon a hill. The world is sick at sight of the multitude of the half-fit; it has a prize for those who make good, and is eager to bestow its reward. Doors will fly open to them; honors and profits are at their command. The *thorough* workman, or clerk, or human of any degree, is wanted in the present day as never before.

Some Pivots Polished

Happiness is often merely the contrast of conditions. A man with the toothache

thinks every one with sound teeth must be happy. The poor man makes the same mistake about the rich. In fact, the very rich man intensifies unhappiness in his frantic efforts to buy escape from it.

Be sure to get what you like, or you may have to like what you get.

The multi-millionaire who gives to charity money that he has not earned is only generous with other people's labor.

An angel is nobody in particular in heaven.

It is the spectator who wants fair play, not the fellow in the scrap.

The love of economy (which is the art of making the most of life) is the root of all virtue.

True goodness is not in *abstaining* from vice: it is in not *desiring* it.

The most anxious man in a prison is the keeper.

"The man who can, does. He who cannot, teaches."

The time, the place and the circumstance are joined in contributing to our appreciations of a thing. Even the best cigar would lose something of its flavor if the smoker sat on a leaking keg of powder.

Sunday is never a day of rest for the devil.

There is no man so good but we could imagine a better. Even the Father of his Country swore lustily on occasion.

What I think of a man is not so important, to me, as what the man thinks of me; and what he thinks of me is of no consequence compared to what my conscience says of me. If I can get good daily reports from my conscience, my other critics may go hang.

You can't size up a danger by running away from it and taking scared glances at it over your left shoulder; but if you stop, turn around and face it, the "horrid front of danger" dwindles in its proportions, and you can define with accuracy the seriously threatening points. If you *must* retreat farther, walk backwards.

If all men understood that liberty means responsibility, fewer would clamor for it.

J. T.

Electric Optical or Jewelry Display Sign

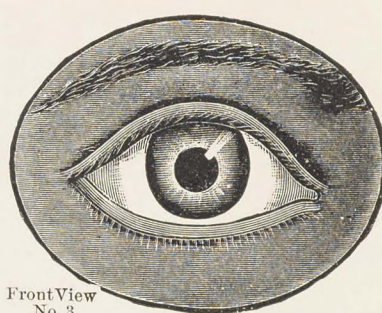
Figures Nos. 3 and 4 show front and rear view of our Electric Winking Eye Sign, made of papier maché, with glass cornea. This sign is as natural as life and winking effect is produced by the "Firefly Flasher." **Price, \$20.00 net**

We are also making an outdoor Winking Eye Sign that shows on both sides same as cut No. 3. Weather-proof and suspended by iron rods. **Price, \$30.00 net**

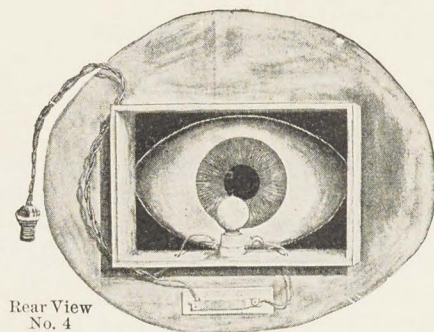
Wax Face Mounted on an Easel

The head is mounted on a black velvet display sign, 16 x 16 inches. The face is made of wax, will not fade from exposure and can be readily cleaned. Hair is natural. Brass hooks are placed around the stand to display your goods. The winking effect is produced by the "Firefly Flasher" and winks as natural as life.

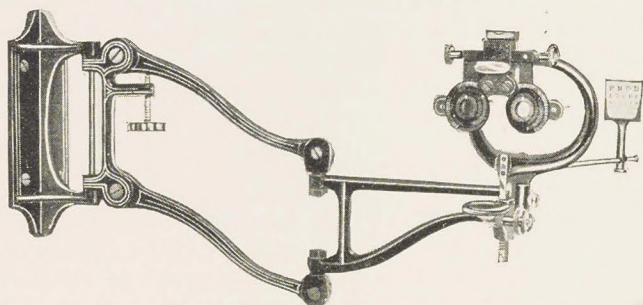
Price complete, boxed, \$10.00 net



Front View
No. 3



Rear View
No. 4

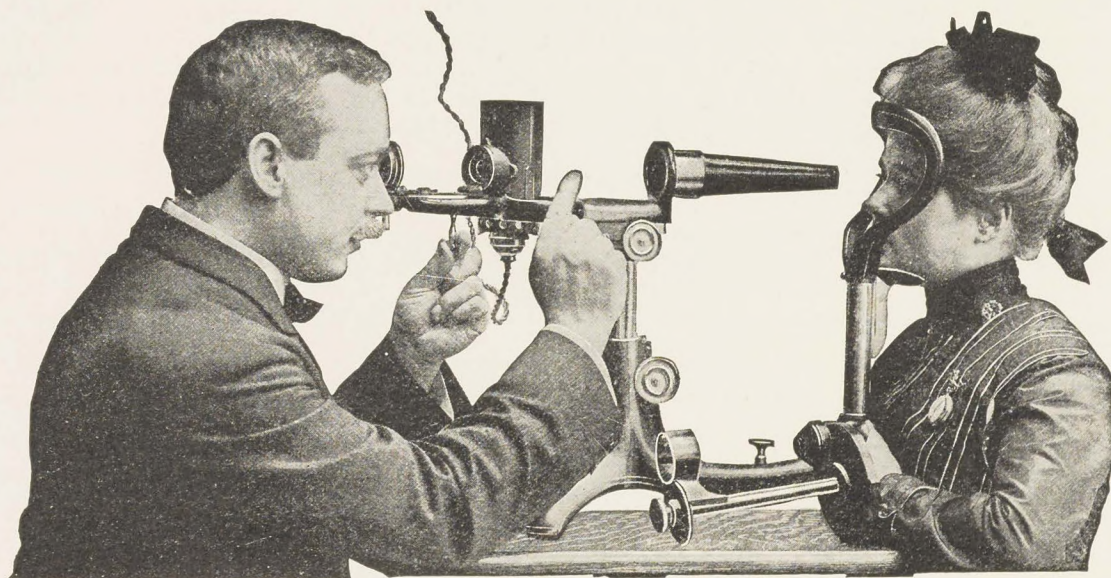


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Review of Current Ophthalmological Literature of the World

Eyestrain

In the *Journal of the American Medical Association*, Dr. Lewis S. Dixon urges the importance of giving the eyes rest, which can be done in emmetropic eyes by looking off at a distance. The hypermetropic eye cannot thus rest, however, because it must accommodate to see clearly at any distance. Muscles are not rested by removing part of the burden they bear, but by being allowed to relax completely. This the hypermetropic eye cannot do so long as the eyes are open. Hence, in many cases of eyestrain, complete relief is gotten only by correcting all of the hypermetropia and having the patient wear the correction for distant as well as near vision, as not until this is done do the ciliary muscles get a chance to relax entirely.

Dixon holds that, contrary to general opinion, it is better in these cases to slightly over-correct than to under-correct the hypermetropia. The thing sought for should be, not clear distant vision, but ability to use the eyes with comfort.

Keratoconus or Conical Cornea and Its Optical Treatment

By the term conical cornea or keratoconus we signify that peculiar condition of an otherwise clear cornea which is characterized by a conical or rather hyperboloid form. This peculiar deformation usually affects those parts of the cornea which lie a little below the center and mostly gives rise to high myopia and high astigmatism. It occurs usually in early youth and often enough in corneas which appear to be quite healthy. No cause can be found in most cases, although in some an injury seems to have been the first factor. In those cases where the cornea was examined anatomically a considerable thinning of the more central parts was observed, which would explain how easily the membrane is affected by outward pressure. This peculiar lasting effect of an outward pressure on the cornea has been observed even in almost healthy eyes, as is shown by the case of Purkinje, who was able to temporarily abolish his myopia of 6 dioptres by putting little leather bags filled with one-half pound of iron filings on his eye and allowing them to rest there the whole night. The following case shows how sometimes such pressure may be utilized to arrest and even improve the conical deformation of the cornea. The case was reported by Dr. Neep before the Colorado Ophthalmological Society:

A girl of eighteen years had a history of good health, excepting headaches, indigestion and nausea following the use of rich or cold foods. The right eye showed conical cornea. It had been struck by a snowball six years previous and vision had rapidly

diminished in the six months prior to August, 1904, at which time an examination of the refraction under homatropin revealed: R. V. $\frac{20}{80}$ C. — .50 sph. C + 7 cyl. ax. $180^\circ = \frac{20}{40}$ +, L.V. $\frac{20}{80}$ + C. + .50 cyl. ax. $15^\circ = \frac{20}{15}$ +.

Until recently the above correction had been worn, but at present the cylinder in the right eye is only one-half the above strength. For several months the patient had worn a cap, always at night and much of the daytime, with a strap under the chin and one over the eyes, arranged to hold pads on the eyes with slight pressure. All headache had disappeared, the corneal astigmatism had apparently been reduced one-half, and progressive increase of conical cornea and loss of vision had been checked.

About Spectacles as Carriers of and Protection Against Infection

Before the Berlin Ophthalmologic Society, Dr. Rosenthal lately spoke about spectacles in as far as they might act as carriers of or protection against infection. His bacteriologic experiments were made because Prof. von Michel asked him to find out the cause for the fact that patients took longer time to recover from their conjunctivitis when they were wearing dark glasses than when they did not do so. The doctor made his experiments by means of cultures from the bacillus prodigiousus in such a way that certain persons exposed their eyes to a spray of these bacteria. It was found that the dark glasses offered a certain protection against infection by these microbes but that a reinfection soon occurred in all persons who continued wearing the glasses that had been contaminated with the infected material. It would appear from these researches that an ordinary case of conjunctivitis had better not be advised to wear dark glasses unless the glasses could be sterilized from time to time.

Stilling's Theory About the Causation of Myopia

In a recent article of the *Zeitschrift f. Aughk.* Prof. J. Stilling complains that most authors did not understand his theory as to the cause of myopia at all. He again states that myopia, as far as it is caused by near work, develops by a relatively great longitudinal growth of the eye under the pressure of the external muscles. But Stilling does not claim, as most of his critics assume, that the pressure of the muscles directly causes a change in the form of the eyeball. His idea is that the tightened tendons act as resistances to the growth of the eyeball at right angles to the direction of the tendon and that therefore the increased pressure of the external muscles during near work causes the eye to grow more in the direction of the least resistance, that is, in the longitudinal direction. This increased pressure of the eye is not caused by the oblique muscles alone but by all the muscles which are employed during the act of convergence.

A High Authority on the Treatment of Low Degrees of Myopia

Schmidt-Rimpler, the celebrated German ophthalmologist, in a recent paper, thinks that the standpoint is extreme which requires myopes of .75 D. and less to wear their glasses constantly. In his experience he has observed that full correction, even in the medium degree of myopia, causes discomfort in persons with good vision and accommodation. The doctor further has become very cautious in recommending Fukula's operation on the crystalline lens. He no longer removes the lens from the second eye and believes that more highly myopic eyes are lost after the operation than without it. In this country, however, the results of recommending the full correction in myopia have been so good that the American refractionists will certainly continue to do so in spite of the contradictory experience in Germany.

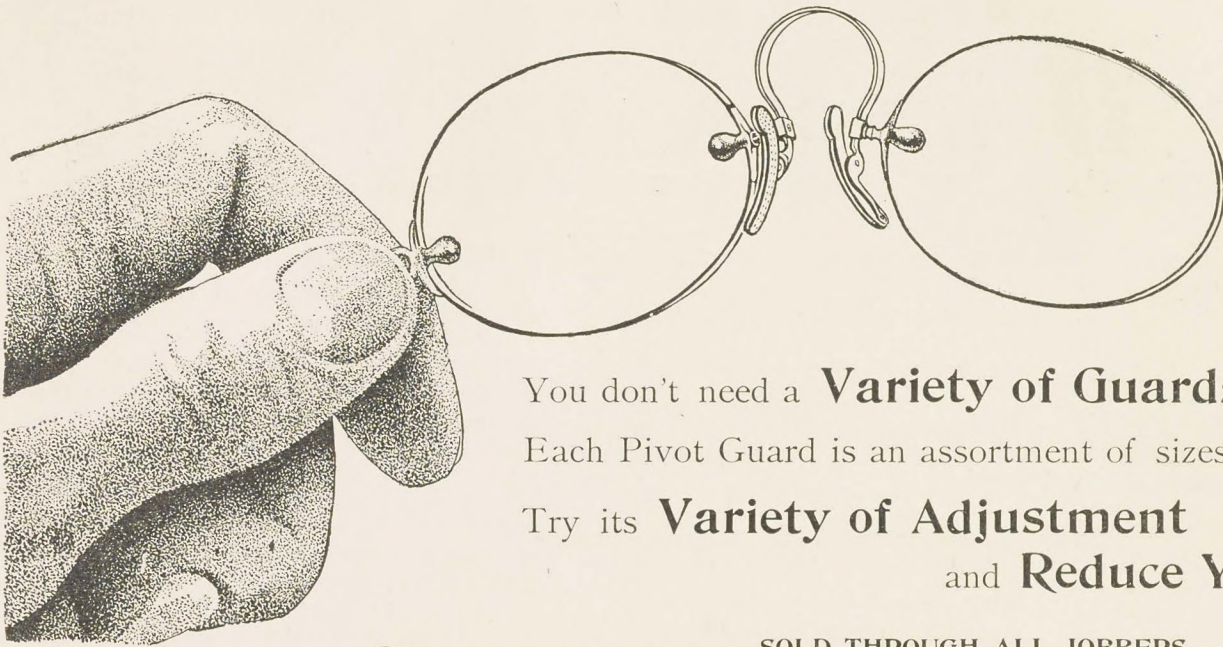
A New Theory of Accommodation—A Critical Review of Its Main Features

In a recent issue of *The American Journal of Ophthalmology* Dr. F. Park Lewis, of Buffalo, N. Y., has published a new theory of accommodation, in an article entitled, "The Ciliary Processes in Accommodation." The doctor states his views as follows:

Briefly, there are three possible methods by which accommodation could be effected, excluding, as disproven, any alteration in the curvature of the cornea, or of the fundus, or any backward and forward movement of the entire lens. These are: First, the method of Helmholtz based upon an inherent elasticity within the lens capsule with a relaxed zonule and requiring for a shortened focus an increase in curvature of the anterior lenticular surface. Second, the method of Tscherning founded on the assumption of the formation of a lenticonus in accommodation, with a tense zonule; and third, the method of Dudgeon, which seems to have been overlooked by most observers, as I can find no reference to it, and which assumes an inelastic lens and requires as an explanation of its focal adjustment an axial rotation which as the lens is paraboloid in form and not bi-convex, would give in effect precisely the lenticonus that Tscherning thinks that he has demonstrated.

Assuming, then, that Tscherning's observations which have been so carefully made and so accurately described are correct, and omitting any discussion at this time as to the possibility of an axial rotation as suggested by Dudgeon, the inquiry naturally arises whether the mechanical changes which occur in accommodation are inadequately explained by the employment of the ciliary muscle alone. It does not seem to me that they are. It would be impossible with a relaxed zonule, such as Helmholtz thought obtained in accommodation, to have the lenticonus as a result which Tscherning has practically demonstrated. Tscherning's theory, on the other hand, does not seem adequate to explain the phenomena which undoubtedly occur. Long before Bowman's discovery of the long fibres of the ciliary muscle, or of Müller's of the circular ones, it was believed that the large vascular plexuses constituting the ciliary processes and which from their very bulk occupied so much of the limited space in this region exercised an influence on

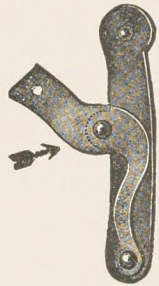
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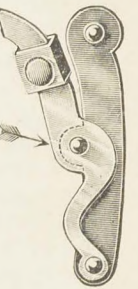
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Ophthalmological Reviews

A New Theory of Accommodation

(Continued from page 659)

accommodation. But when the microscope showed the true structure of the ciliary muscle the assumption quickly followed that it was to its action alone that all focal changes should be ascribed and that the ciliary vessels had purely secretory and nutritive functions. When, however, we note the size of these vascular masses, especially large in some of the lower animals, and consider how their bulk would be increased when engorged with blood, it can scarcely be doubted that the resultant pressure would affect the delicate adjustment upon which they actually lie.

The long fibres of the ciliary muscle are attached anteriorly in the sclero-corneal tissue constituting the boundary wall of Schlemm's canal. They are attached posteriorly to the chorioid. The fibres of Müller form the angular ring beneath those of Bowman.

The physiologic action which follows would almost seem obvious. A contraction of the long fibres relaxes the zonule. Coincidentally with this, the circular fibres surrounding the margin of the iris contract, impeding the free venous flow and causing the ciliary processes to become turgid with blood, they in turn pressing, by their bulk, on the anterior part of the suspensory ligament of necessity flatten the edges and protrude the center of the lens in exactly the form that catoptric tests have shown to be present.

Accommodation having been completed, the muscles relax allowing the vessels which have been full, to empty, in all probability in doing so allowing the overflow to pass into Schlemm's canal.

This theory would look quite seductive at first, but the reviewer believes that it is entirely untenable. First, in regard to the doctor's statement that it would be impossible to have a lenticulus with a relaxed zonule such as Helmholtz thought obtained in accommodation. But there is no objection to the assumption that the fibres of the crystalline are so arranged that they assume a lenticular shape under the influence of the capsule as soon as the compression of the zonule has been removed. This, therefore, offers no serious objection to the theory of Helmholtz, which, on the whole, in the light of the new observations of Hess, seems still to explain the facts best, although Tscherning undoubtedly has done much to the better understanding of the act of accommodation. Now, secondly, as to the doctor's new theory itself that the ciliary processes play the most important part in the accommodative act. Here the reviewer must remark that the theory is by no means a new one, for as early as 1854 Czermak endeavored to explain the mechanism of accommodation by a swelling of the ciliary processes, and even one year earlier L. Fick had done the same in his theory. But the latest observations of Hess and others are decidedly against this explanation. Hess made his observations in cases where a natural or post-operative defect in the iris allowed him to observe the ciliary processes directly. He says that in older people, during the act of accommodation or after the instillation of eserine, the ciliary processes indeed came considerably nearer to the margin of the lens without, however, coming in direct contact with it. In young patients he frequently was unable to observe any diminution of the distance between the processes and the crystalline margin, while Sattler and Bauerlein saw the distance become even greater during the act of accommodation in albinotic eyes. Hess further remarks in the second edition of

"Graefe & Saemisch's Handbuch" (p. 222), that during the contraction of the ciliary muscle the ciliary processes place themselves *before* the plane of the crystalline equator and never behind or even up to this plane, as is assumed by Schoen and Tscherning. Hess never could observe a real swelling of the ciliary processes and believes that the small, observed changes are to be referred only to a displacement of the ciliary processes without any increase in volume. Bauerlein also denies an increased size of the processes during the accommodative act.

From these undoubted facts it would appear that Dr. Lewis' theory is not well based on experiments and that it never will be able to make any decided stand against the older theories of either Helmholtz or Tscherning.

An Interesting Experience About the First Sight of a Boy Who Was Born Blind and Later Made to See by an Operation

That we learn to see very gradually is well shown again by a case of Dr. Schanz, reported in the *Zeitschrift f. Aughk.* The doctor there describes in full the case of a boy who had been blind with congenital cataract for the first six years of his life. The chalky masses in the crystalline were cut through with scissors and a clear pupil was obtained. It was particularly striking that the boy, on learning to see, did not recognize the most familiar objects of his former life, unless he was allowed to feel them at the same time. He even did not recognize his own image or that of others in the looking-glass and could not tell the simplest pictures of objects, because he could not refer to his sense of touch, which alone had been trained in his former life.

The Relation of Convergence and Accommodation

Before the section on ophthalmology of the College of Physicians of Philadelphia, Dr. Howard F. Hansell read a paper on this subject. He said it was admitted that about 75 per cent. of the cases of functional internal strabismus are due to uncorrected hyperopia, and in a proportion of these cases, if seen early in life, the strabismus may be cured by the rest to the ciliary muscle obtained by wearing proper correction for the refractive error. A small percentage of the remaining 25 per cent. may be due respectively to structural defects of the muscles, to abnormalities of the orbit, to disease of one eye and other causes. Dr. Hansell called attention to a possible cause that has been practically overlooked, that may be accepted as explanatory in a few cases, namely, the primary innervation of the muscles of convergence independently of the state of refraction. He reported three cases in which the strabismus bore no evident relation to the refraction as a causative factor. In one, indeed, the stimulation to convergence in the interest of binocular single vision always induced myopia of 3 D. This case demonstrated the condition the reverse of that usually in evidence, the dependence of the refraction on the convergence rather than

the convergence on the refraction. He emphasized the point that in investigating the etiology of strabismus, particularly in adult subjects, it is well to remember that the fault may lie primarily in the muscles of convergence.

New Observations by Means of the Orthoscope

The orthoscope is nothing but a little glass box which is filled with normal salt solution and pressed against the cheek in such a manner that the solution touches the eye and the latter now has to see through this water and the thin wall of glass in front. Thus the refraction of the cornea is entirely eliminated and its refractive power may be replaced by any convex lens of from 1 to 20 D. Every one of these lenses gives a perfect picture on the retina, provided the proper distance is selected, but the picture is the greater the weaker the lens. It is possible to calculate the refracting power of the cornea from the dioptric power of the lens, its distance from the eye and the magnification of the image. This method is being used at the present time by Dr. Schoute, of Antwerpen, and we may expect valuable results from the researches of this careful author.

The Ophthalmoscope and How to Use It

Undoubtedly there are many excellent treatises on the ophthalmoscope and its use, but there are very few that can rival in its practical usefulness the latest volume on this subject by Dr. James Thorington. This book of about 300 pages is published by the well-known Philadelphia firm of P. Blakiston's Son & Co., and, as the author says, has been written for the student and general practitioner who desires to obtain a working knowledge of the ophthalmoscope with the interpretations of its findings and has not the time ordinarily to study a large text book on the diseases of the eye in which the subject is too deeply imbedded for immediate comprehension.

The reviewer regrets that the author still sticks to the terms "dioptr" and "choroid," instead of "dioptry" and "chorioid," and take particular exception to his statement which makes the original ophthalmoscope of Helmholtz a crude affair. On the contrary it is a very refined instrument and if it was not for the fact that it is less handy in daily use would often show the fundus better, especially in an eye with undilated pupil.

We can recommend the little volume to all of our readers who want a practical book for their instruction on this important subject.

An Oculist's View

In a recent lecture a British oculist said: The obscure dyspepsias, the unrelieved headaches, the unclassified neurasthenias, are only too often due to ocular conditions unrecognized by the general practitioner, simply because the demands upon his attention forbid his becoming familiar with conditions of the eye which are familiar to the ophthalmologist.

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(Continued. Part XVI)

By convention, we imagine ourselves to stand at the center and look along the axis in that direction which makes the motion appear to us like the hands of a watch or the motion of a right-handed screw.

By a single measured line, therefore, we can record no fewer than three quantities:

- (1) The *axis* of rotation, by the direction of the line;
- (2) The *amount* of the rotation, by the length of the line; and
- (3) The *sense* of the rotation, by the direction from the center in which the line is drawn.

We may choose any units we please. Suppose, for instance, we decide to represent degrees by millimeters, then 10 millimeters measured along a direct line means 10° of rotation about that line as axis, and in the same sense as that of a screw being screwed along the direction of measurement. We have only to seize the line at its origin, and *screw*, to understand the sense in which the rotation occurs.

We may compound rotations, therefore, or resolve them as we please, on the same principle as the parallelogram of forces.

Dynamics of the Eye.—In theory the dynamics of the eye are exceedingly simple, since the resistances are elastic (and conform, no doubt, to Hooke's law, "*Ut tensio sic vis*"), the forces are tangential, and the lines of the forces may with little error be reckoned as equally distant from the center of motion, so that the moments of the forces are proportional to the forces themselves.

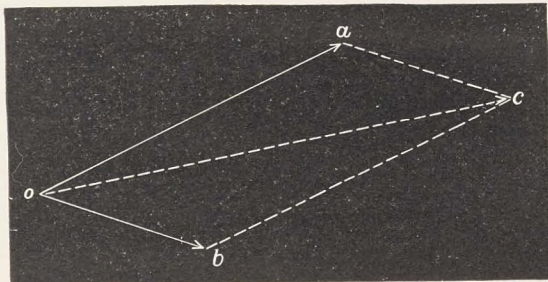


Fig. 28

Composition of Rotations

The "moment" of a force about a point is the importance of that force as regards balancing or producing rotation about that point. The greater the distance of the line of force from the point, the greater is the moment of the force.

Forces only Estimated by Results.—The resistances to rotations of the eyeball are no doubt greater about some axes than about others, and since we cannot calculate this element, we are driven to study the forces as if measured only by the rotations they produce. Instead of compounding *forces* we are obliged to compound *rotations*, for the forces are unknown quantities to us, while the rotations can be investigated to a high degree of accuracy by the behavior of double images and after-images.

Fig. 28 illustrates the composition of rotations in a rotating body whose center is at *o*. The arrowheads on the lines *oa*, *ob* represent the directions in which the lines are measured, and therefore the sense of the rotation which takes place about each as axis and which is the same as that of an ordinary right-handed screw screwed in the direction of the arrow.

Thus the line *oa* represents a rotation proportionate to the length *oa*, and about *oa* as axis, in the sense of a screw driven from *o* to *a*. The line *ob* represents a smaller rotation, since it is a shorter line, about *ob* as axis and in the same sense as a screw driven from *o* to *b*.

When two forces, capable when acting singly of producing these respective rotations, are impressed upon a body simultaneously, the rotation which results is represented by the diagonal *oc* of the parallelogram *oacb* completed by drawing *bc* and *ac* parallel respectively to *oa* and *ob*.

The resulting rotation, therefore, is about the axis *oc*, proportional to the length *oc*, and in the same sense as the rotation of a screw driven from *o* to *c*.

The reason for this actual composition of the rotations is as follows: If the body were only subjected to one of the rotations *oa* or *ob*, any point in it would move over a distance proportional, firstly, to the amount of rotation, and, secondly, to its distance from the axis of rotation; just as the rim of a wheel travels farther than the hub during a given rotation, in proportion to its distance from the axle. When the rotations *oa* and *ob* take place simultaneously, points which lie between their axes would rise in consequence of one rotation and sink in consequence of the other, and there is a line of points (*oc*) so situated that the rising and sinking exactly neutralize each other. The distance of each point in this line from the two axes is inversely proportional to the amount of rotation about the axes, so that the faster rotation of the body as a whole about one axis is compensated for in the case of the point under consideration by its greater distance from the other axis. These points, therefore, all remain stationary and form the new axis of rotation. All points which lie to the *a* side of it are depressed, because of their distance from *ob* being too great to be compensated for by the greater rotation *oa*; while points to the *b* side of *oc* are elevated for the contrary reason.

Now let us apply these principles to the eyeball. Let Fig. 29 represent a horizontal section of the eye, where *A* is the anterior pole of the eyeball and *P* the posterior pole, so that *AP* is the optic axis. The line *DE* is the transverse axis; *IS* is the axis of rotation for the superior and inferior recti, and *I'S'* is the axis of rotation for the obliques.

A measured quantity (*Or*) along the line *OS* from *O* as origin, indicates a measured rotation of the globe in the sense of a screw proceeding from *O* to *S*. This rotation elevates the cornea and is such as would be effected by the superior rectus acting, were it possible, alone. Similarly, any measured quantity (*Os*) from *O* towards *I'* specifies a proportionate rotation by the inferior oblique, which also elevates the cornea, since the sense of rotation is that of a screw passing from *O* to *I'*.

These rotations (*Or* and *Os*), when they occur simultaneously, are compounded into the single rotation *OE*, which takes place about an axis in Listing's plane.

Now, as in Fig. 30, let us drop a perpendicular from *A*, the center of the cornea, upon the axis of the superior and inferior recti (*IS*). What have we? The vertical plane passing through this line is the plane of motion for the center of the cornea during isolated action of either the superior or inferior rectus. The anterior pole of the eye under these conditions describes a circle in this plane, which we might call the *corneal orbit* for these muscles, since it is the path in which the center of the cornea travels under their guidance. (See Fig. 30).

A plane, therefore, passing through *A* perpendicularly to the axis *IS* is the *plane of the corneal orbit* during rotations about that axis; and we see at once that in whichever sense such rotation takes place, it must necessarily *adduct* the cornea, as well as elevate or depress it.

In precisely the same way a perpendicular may be dropped from the center of the cornea (*A*) upon the axis of the obliques (*I'S'*): the vertical plane passing through this line is the *plane of the corneal orbit* during rotations about that axis, at once indicating that abduction of the cornea is a result of such rotations whether they are produced by isolated contraction or isolated paralysis of either oblique, if the usually accepted view is correct that the obliques have a common horizontal axis.

Resolution of Rotations.—Next, let us see how to resolve rotations due to individual muscles.

Take the inferior rectus as an example, and in Fig. 29 let the distance *OI* represent the maximum rotation it can effect. Drop perpendiculars from *I* upon the transverse axis *DE* and the optic axis *AP*; these perpendiculars cut off distances from *O* along these axes which represent the component depression and torsion respectively.

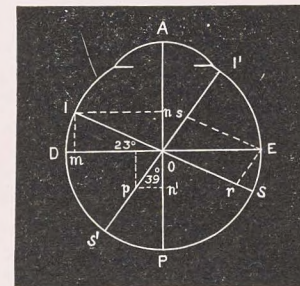


Fig. 29

Horizontal Section of a Right Eye

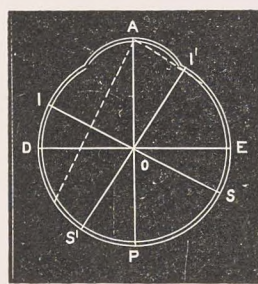
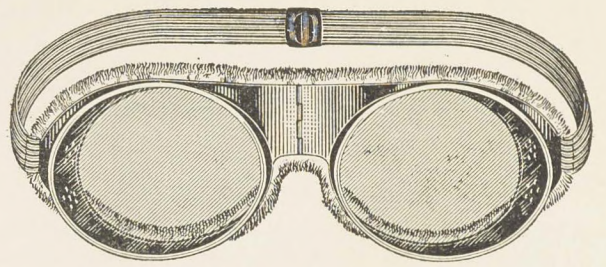


Fig. 30

Horizontal section of a right eye. The longer dotted line from *A* indicates the vertical plane, to which the motions of the anterior pole of the eye are confined under the guidance of the Sup. and Inf. Recti. The shorter dotted line indicates the same for the Obliques.

(TO BE CONTINUED)

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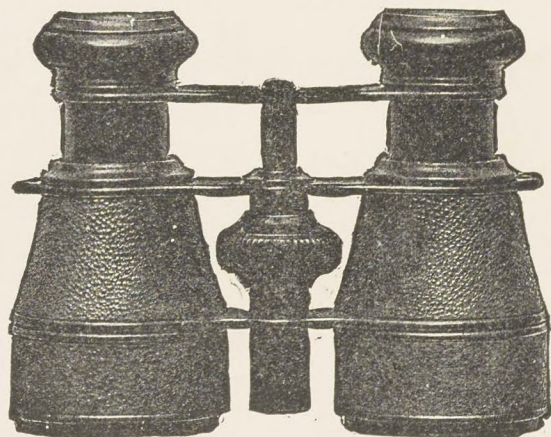
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NO refractonist and in fact no well-informed man nowadays will deny the fact that there is such a thing as eyestrain and that this eyestrain may give rise to many and even remote symptoms in the human system. Some even go so far as to assert eyestrain as a cause of epilepsy. But right here it must be stated that the word cause is often used quite improperly. It ought to mean something which invariably gives rise to another thing, called the effect. But it is very rarely that the word cause may be used correctly in that sense. Usually there are many causes at work which produce a certain phenomenon and which are set aside only because the mind desires to dwell more upon this one factor in the product. Take for example gravity as the cause of the fall of bodies. If you have an apple in your hand and let it go it certainly will fall because the earth attracts it; but if you have in your hand a balloon inflated with hydrogen and let this go it will not fall but rise into the air, although gravity acted as well here as before. Even the apple will not fall if you release it while your hand is at the bottom of a vessel filled with mercury. It will rise to the surface of the mercury. The same cause, therefore, that is, gravity, may give rise to opposite phenomena according to the other factors or causes which are acting at the same time. In the same way eyestrain may produce quite different results according to the other factors which are at work. To expect that the correction of a refractive error should always act in the same manner or to give eyestrain as a potent factor in almost any ailment of the human body is a view that cannot be upheld by the experience of the more unbiased observers. Still such views are held by some good workers in the field of refraction, and foremost among them, by Dr. G. M. Gould, of Philadelphia, the most fertile writer on this subject. His latest contribution in this direction is the third volume of "Biographic Clinics," published by P. Blakiston's Son & Co. This volume can be recommended to any reader who wants to be informed on the views of this brilliant writer. As an illustration, we reprint here a few pages from his article entitled "The New Ophthalmology."

The Eye and the Changing Conditions

A key to many mysteries of disease might be found in a careful classification of such as have increased with civilization as compared with those conditions outside which have been changed during the progress of civilization. Among these changed conditions none can be more noteworthy than the new kind of labor, and the tremendous addition of the amount of it thrown on the eye by the printing press, schools, sewing,

clerical and urban life. No other organ has been subjected to such a change of work and stimulus, and in all other functions the same kind of work is now demanded as before. The eye, however, was brought into function to use in distant vision, and if for near, for but an instant. Osler says that dyspepsia is the besetting malady of this country, due to improper diet, etc., although modern food is many times more certain in amount and good in quality than ever before. It is certain that stomachic and nutritional diseases seem to have increased inordinately. What is the cause of this contradiction? One, surely, is eyestrain, which is extremely prone to upset the digestive function. See several thousand cases of nausea, "dyspepsia," loss of appetite, constipation, etc., relieved at once by glasses, see the disease return at once when the glasses are broken, a lens reversed in a frame, or when the refraction changes, and one recognizes the fact of the interrelation. Allied to this class of cases are those in which the keen ophthalmologist detects more than hints that renal affections, hepatic ones surely, including gall-bladder diseases, may possibly be set up or aggravated by severe reflexes from the eyes to the secretory and eliminative organs. Some day it will be established that eyestrain is a large factor in the production of diseases of the kidneys.

Undermining Mental and Physical Vitality

One of the more subtle but still easily recognizable methods in which eyestrain works perniciously is by a slow and general denutrition and reduction of mental and physical vitality whereby the resisting powers of the system are reduced to such a degree that it becomes the easy prey of infections, and of general and terminal diseases. This makes eyestrain a factor in the tuberculosis and pneumonia crusade. The life study of patients and their diseases—the biographic clinic—will make such a connection more often manifest. The sad story of the life of John Addington Symonds is in this way suggestive.

The age-long superstition whereby almost all the diseases of women were traced to the sexual organs and functions, is fast giving way to a new view more in correspondence with facts. That puberty and menstruation should inaugurate a host of terrible evils, and the menopause another legion, is at the least contradictory. The proper name for the cause of many supposed disorders of menophania and puberty is study with astigmatic eyes; that for supposed menopausal woes is presbyopia. In a large number of instances *ὀφθαλμός* may replace *ὕστερα* as the organ primarily at fault. The oculist and gynecologist should be good friends. The connection between the eye and sexualism is known of old, and is a deep and profound one. Love of any and all kinds dilates the pupil, the designation of the grand sympathetic system itself arising from the fact. A certain profound relation of vision and sexualism will sometime be established which as yet is unsuspected.

Causes of the Indifference

Justly motivated, therefore, is the question: Why has this great truth been so long ignored, and why now do so many reject it? Some of the answers are these:

1. The progress of science has not yet reached the stage that will enable certain minds to see its truth.
2. The conditions of life and professional evolution have made surgery of supreme importance.
3. Organic diseases had first to be studied.
4. The laws and status of infectious diseases had first to be made definite.

5. A mere habit of neglecting the eye and its all-important-function and diseases has with some grown into a blind dogmatism.

6. The theory of optics, and the elaboration of mathematical formulas, satisfied too many minds, and there was no proceeding to the practical application in clinical work.

7. Specialists in medicine, other than ophthalmologists, have overstated the effects of the diseases of special organs.

8. The ophthalmic tenotomist has made unwarranted claims and so made the profession blind and deaf to the warranted claims of the refractonist.

9. The commercial medical journal plays to the galleries, and flatters the prejudices of its readers.

10. Patent medicine vendors, drug-sellers and quackery within the profession carry on the irrational tendency.

11. Suffering and pain are positive, relief and cure negative. The patient, therefore, is prone to forget the primary misery, nor does the physician recognize the cause of the cure by glasses, which is ascribed to fate, *gale répercutée*, the doctor and his drugs, etc.

12. The method of eliciting symptoms and of clinical note-taking is so faulty that the very existence of the chief symptoms of eyestrain is not recognized. The patient thinks the vomiting, abdominal symptoms, migraine, headache, dyspepsia, insomnia, loss of energy, etc., have no possible connection with the eyes, does not allude to them, and they are thus wholly ignored. Thousands of such have been cured by glasses, and the fact unsuspected by either physician or patient. In another, less large, number of cures the method of cure is known or suspected by the oculist, who is silent concerning it because of the desire to "stand well with the profession," or to secure reference cases from those physicians and neurologists who disbelieve in the "extremist" and all his work.

13. The desire for consultation practice, referred cases, professorships, hospital positions, and "success" make the cunning silent or conservative. "Faddism" and "hobby-riding" charged to a budding reputation are ruinous.

14. Poor refraction work on the part of oculists is the greatest cause of scepticism. Those who do accurate refraction know perfectly well that, broadly speaking, the ophthalmologists of the world have done their refraction work badly. The logical and pathologic conclusions of the labors of Donders, Helmholtz and others have been practically made only by some American and one or two English refractonists. "I sent my patient to the oculist and glasses had no effect on the disease," means utterly nothing. "Is not my oculist a man of the highest renown and ability?"—may mean as little. Does this man of renown and ability teach, and in the persons of his patients demonstrate that so-called "migraine," headache, sick-headache, dyspepsia, spinal curvature, insomnia, neurasthenia, anemia, the blues, and the rest of the list, are often, very often, due to eyestrain? Belief in the truth is a prerequisite of ability to cure; and is absolutely essential to a rigid attention to at least "seventy-eight reasons why glasses failed to give relief." From 50 to 75 per cent. of glasses prescribed in the world are inaccurate and cannot relieve eyestrain. Then it is also true that fully 90 per cent. of the adjusting of opticians is so bad that any possible therapeutic result is not obtained.*

*The reader is asked not to judge the good side of the doctor's work by this last statement.

* "Biographic Clinics" can be had from this office on receipt of price, \$1, net.

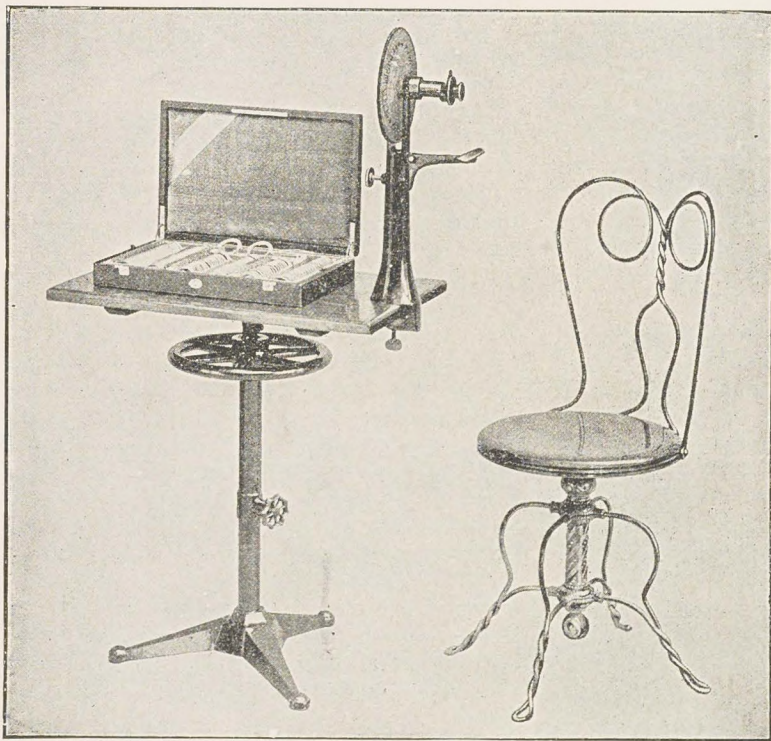
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HOM. COMB & SON, Shullsburg, Wis.

Yours of Sept. 6th received, and in reply would say we never gave a testimonial to anyone, as they are so easily bought from some. But will say that anyone who buys your Ametropometer will never regret the purchase."

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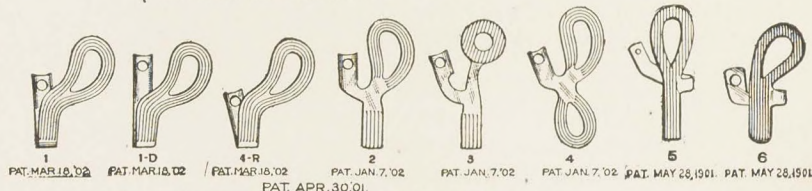
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No. 1 is the guard most generally used—will fit most cases.

No. 1-D is the guard to raise the lenses for distant use.

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The Lasso Guard. Made with a loop or "lasso" shaped end large enough to allow the skin of the nose to slightly imbed itself, thus helping to steady the glasses. A series of grooves following the outline of the guard, come in contact with the nose and further contribute to the steadiness of the glasses. The springiness of the guard allows the free movements of the face and nose muscles without moving the lenses.



FOX TUBULAR SPRING

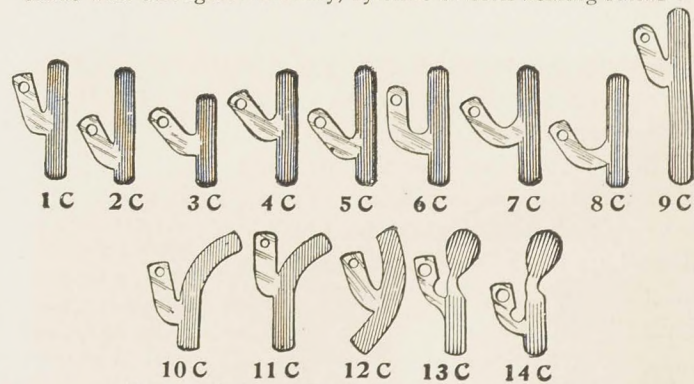
The Tubular Spring, concave on the inner surface, gives more strength and greater resiliency, and has a neat, attractive appearance.

THE SCREW LOCK ENDS

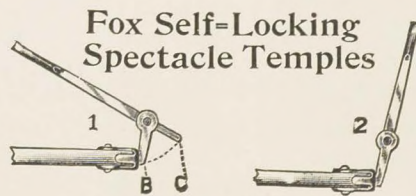
Both the Lasso guard and Tubular spring have slightly convex ends so designed that when screwed to the studs they spread outward against the sides of the stud and press upward against the screw head, making a sure lock which prevents the screws from coming loose.

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Pat. Aug. 13, '01

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How a Light Should Be Placed for Reading

AS opticians are supposed to be authorities on lighting, especially for reading purposes, they will peruse with interest and profit the following extracts from an article in a recent issue of *The Electrical World*, to which journal we are also indebted for the illustrations:

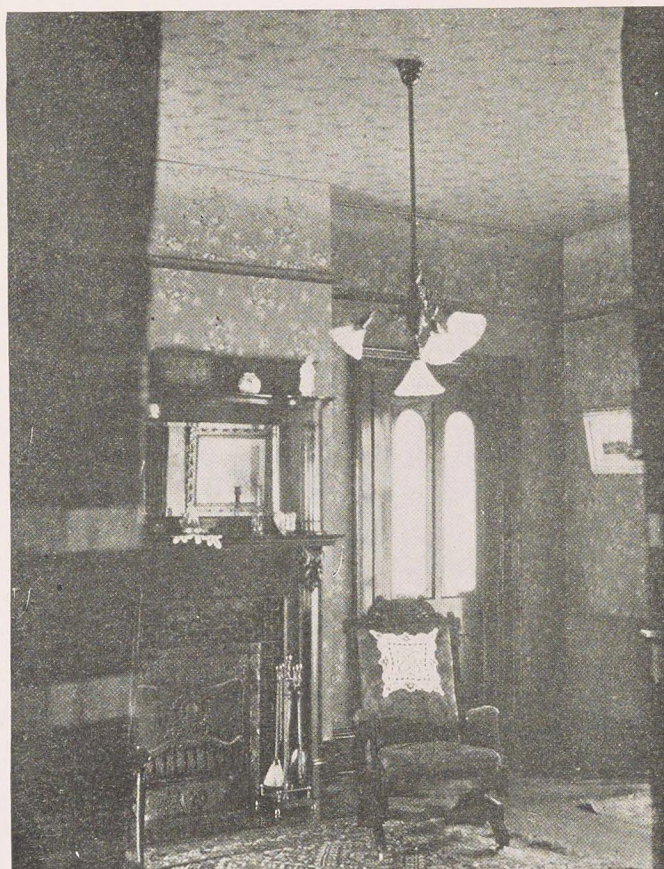
The reading light is one that is likely to be used constantly and has so much to do with the comfort and eyesight of members of the family that it needs earnest consideration. There are three common ways of obtaining a reading light. One way is to illuminate the whole room so brightly that reading is easy in any part of it. This is usually undesirable for two reasons: One is, that the eye is likely to tire more quickly in a room so brightly illuminated in all corners than it would if it had an opportunity to rest by looking from the lighter to the darker parts of the room occasionally. The cost of lighting a room so brilliantly as this makes it out of the question in the majority of rooms. We will, therefore, leave out of consideration this method of securing a reading light and consider the second and third methods. The second method is to use a lamp placed near the reader and fitted with a globe or reflector which will concentrate nearly all the light on the book or paper. If we do this, the reading lamp is likely to be of little value in the general lighting of the room and we will have to add other lights besides the reading lamp if the greater part of the room is not to be in comparative darkness. The third method, which is the one usually to be preferred where the greatest economy is an object, is to use the same light both for reading and for the general lighting of the room

by equipping the reading light with a globe or reflector which will concentrate a considerable portion of its light within the area in which it is desired to read and at the same time allow enough light to radiate in all directions to give fairly good illumination over the rest of the room.

The popular impression that a portable table lamp is better adapted to reading than a lamp on a chandelier or bracket is regarded by the authors as a misconception, such table lamps being merely an inheritance from the days of the candle and oil lamp. They say:

With electric light, usually much more satisfactory results can be obtained with a properly equipped reading light on or suspended from the chandelier or on a bracket on one of the side walls. The reason for this is that it is impossible with a table lamp to secure a reflector which will throw as large a proportion of the light where it is needed for reading purposes as can be obtained from the proper reflectors on chandeliers and brackets. Most of the electric portable stand lamps throw the greater part of the light down on the table around the base of the lamp, so that the readers sitting around the table get only a small percentage of the light. . . . If the portable stand lamp is used on a library table where the readers place their books on the table each side of the lamp its use is permissible, but such is not the usual condition.

There is also considerable misconception as to the comparative distance from the reader of a lamp located six feet above the floor on a chandelier as against a lamp located on a table. The average person who has never measured these distances is under the impression that the lamp on the reading table is much nearer. As a matter of fact, the distances are nearly the same. There is really for the majority of cases only about one thing to be said in favor of an electric table lamp for reading as against a properly equipped lamp on a chandelier or bracket. This is that with the table lamp it is not as likely that a reader will get the regular reflection commonly known as the "glare" from a page of white paper because the light comes so much from one side. In reading underneath a lamp on a chandelier or bracket the reader must turn the page at such an angle that he does not receive this glare from the paper. This is easily done, but many people



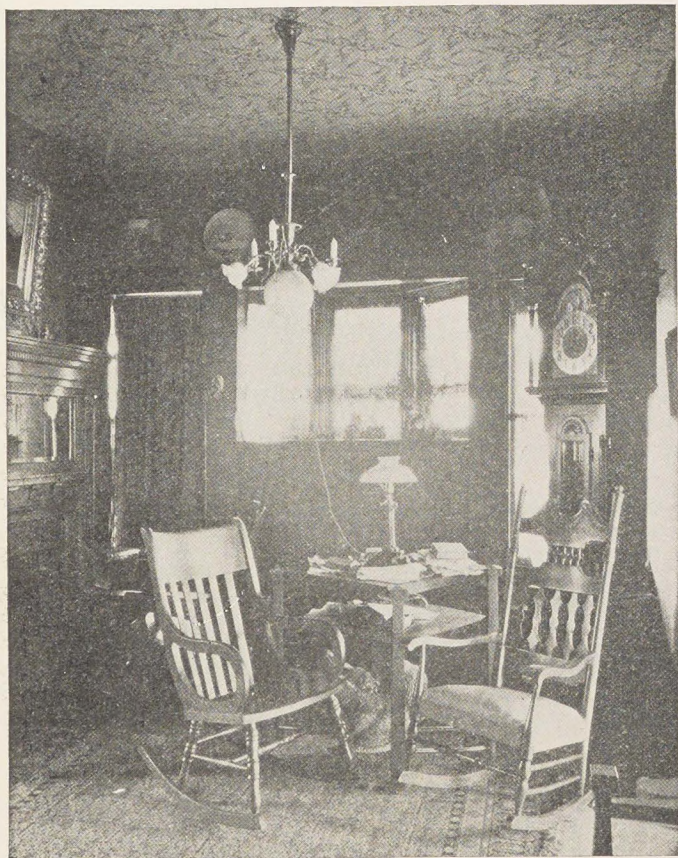
Good arrangement of reading lamp

undoubtedly suffer from this without knowing what is the trouble or taking pains to find out. Since this glare of regular reflection is likely to be more pronounced with electric light than with kerosene lamps, it is probably this that is responsible for the preference that some people have for oil reading lamps even though electric light is available in the rest of the house.

In advocating the use of reading lights placed on chandeliers and brackets rather than table lamps, the authors disclaim a desire to advise trying to read with chandeliers arranged for the general illumination of the room. Chandeliers to be used for reading lights should be specially equipped for the purpose.

The Third Eyelid

Dr. William Robertson, of Durban, states in the *Lancet* that he has recently met a very perfect example of that rare vestigium, a third eyelid. The subject was an adult male Indian, of Dravidian stock, who displayed no other physical defect. This supernumerary eyelid was situated under the right upper eyelid, and protruded, when the eye was in natural function, 2 mm. beyond the margin of the natural lid. Of the thickness of a sixpence, it evenly and completely followed the contour and movement of the upper lid, lying closely over the globe without fold or corrugation on either surface, and with a clean-cut margin at its periphery. Dr. Robertson considers it was a striking display of nature's creative force with only a memory of the structure in the distant past. It will be remembered that the conjunctiva is developed from the surface epiblast, and that the membrana nictitans divides the conjunctival sac into two portions in birds and reptiles.

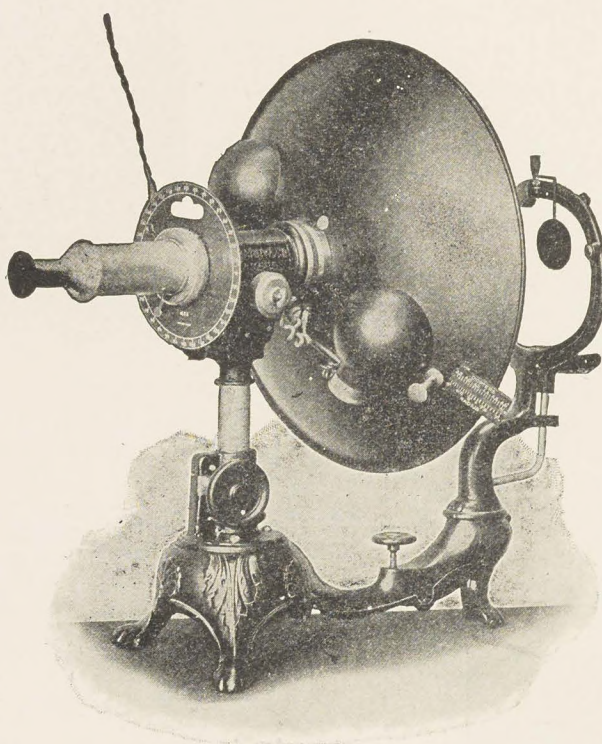


Poor arrangement of reading lamp

The Hardy 20th Century OPHTHALMOMETER

will be found in the offices of more refractionists than any other optical instrument ever made. This is the best possible testimony to its value and accuracy.

It tells absolutely the meridians of greatest and least curvature of the cornea.



It places the axis of the correcting cylinder without having to ask your patient any questions.

Note the slight advance in price made necessary by increased costs of manufacture and material.

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Optical Questions and Answers

Subscribers wishing inquiries answered in this department must send name and address—not for publication, but as an evidence of good faith. Questions will be answered in the order in which they are received. No attention will be paid to anonymous communications.

To enable us to answer questions satisfactorily and give proper advice in the management of cases submitted to us, it is essential that we be furnished with a complete history of each case and accurate information on the following points:

1. Age. (If not possible to give exact age, always approximate.)
2. Have glasses been previously worn? How long and what number?
3. Visual acuteness of each eye, and what improvement glasses afford.
4. Range of accommodation (without glasses and with them).
5. Evidence of astigmatism (as shown by radiating lines).
6. Test for muscular insufficiency.

"W. R. C."—*What is the cause of, and how should one proceed to stop or cure what is known as wild hairs on the lids? They are almost always in the upper lids, and are darker and larger at the base.*

Wild hairs are simply misplaced eyelashes. They become of importance when they come in contact with the cornea or conjunctiva, and thus become a source of irritation, causing redness, lachrymation, burning and a feeling as of a foreign body in the eye. Or even an opacity or vascularity of the cornea or conjunctivitis with purulent discharge. The offending lashes may be removed, when the symptoms subside, until the lashes grow again. The lashes may be thus pulled out every time they grow, or they may be permanently removed by electrolysis. When there are a large number of wild hairs, an operation may be necessary to change the shape of lid.

"V. P. R. & Co."—*Please inform us how to clean the glass of a trial case whose surface is covered with fungus, i. e., a musty shade over the surface, and what is the cause for forming like that?*

Probably due to dampness. Use alcohol and water, ammonia and water, or soap and water—one or all of these.

"J. M. F."—*What is the best to do in prescribing glasses for a patient that can see about equally as well with a plus or minus cylinder, and the axis of the plus are with the dark lines seen on chart of radiating lines and the minus axis is at right angles to dark lines?*

If a convex lens is accepted, never try a concave; this rule, to which we cannot think of any exceptions, applies as well to spheres as to cylinders. Of course, we are guided somewhat by the acuteness of vision, of which, unfortunately, we have no record in this case. If the vision was normal, the concave lens would be all the more strongly contraindicated. As a matter of course, when a convex cylinder is changed to a concave, the axis of the latter is a right angle to the former.

If the patient sees equally as well with the convex cylinders, the case may be classed as hypermetropic astigmatism; in which case concave cylinders must not be thought of. Even if the patient prefers a concave cylinder (if weak), there is great probability that a convex cylinder is the proper correction.

In the choice of glasses in this, as in any other condition, the physical condition of the patient should be taken into account, as well as the balance of the ocular muscles and the amplitude of accommodation. It is manifest that a delicate, nervous woman cannot be treated the same as a strong, hearty man. In the latter case, but little harm might result from reversing the cylinder; whereas, in the former, much distress might follow.

The presence of any muscular imbalance should be determined and, if exophoria is found to be present, the concave cylinder may be prescribed; while, if esophoria is found, preference should be given to the convex cylinders.

If the glasses were desired only for distance, to improve a blurred vision, concave cylinders may

be ordered; whereas, if they were to be used only for near work, to relieve asthenopia, convex cylinders should be preferred. These remarks apply to the slighter defects, where it is difficult to choose between a weak convex and a weak concave cylinder.

"V. P. C. & Co."—*Is there any remedy to remove a cataract without an operation? Is there any remedy to remove the granular ophthalmia?*

There is no cure for cataract except removal of the opaque crystalline lens. Many advertisements appear in the leading magazines promising to cure cataract without operation, but such advertising doctors are quacks, and they should be avoided by those mindful of the welfare of their eyes and their pocketbooks. There is no remedy that will restore transparency to an opaque lens, but it must be removed from the line of vision to restore sight.

Granular ophthalmia or trachoma runs an extremely chronic course, and the treatment must be continued for months and perhaps for years. Astringent remedies are called for, such as nitrate of silver and sulphate of copper, sometimes the granules are removed by mechanical means.

In order that a correct and definite understanding may be had of each case submitted, it is necessary that correspondents should give ALL the particulars asked for at the head of this page.

"F. A. F."—*Man, forty-nine years, never wore glasses, sailor by occupation. Troubled with catarrh of the lungs or sailors' consumption. His physician gave him strychnine, and about three months later his sight failed him suddenly. He cannot read. R. E. vision, $\frac{20}{100}$; L. E. vision, $\frac{20}{100}$. No astigmatism. Would not accept convex lenses for distance, but —.62 S. R. E. vision $\frac{20}{100}$, —.62 S. L. E. vision $\frac{20}{100}$. +1.50 sph. both eyes could read finest print at 14 inches. I gave him above for far and near, but he cannot see distinctly with them, or as good with spectacles as he did with trial lenses. Later I tested muscles: found R. E. normal, but L. E. with Maddox groove the streak was about four feet to right of flame; required 17° prism base in over left eye to bring streak over flame. I do not know what to do in this case; am afraid to give him so strong a prism.*

Our correspondent tells us that his patient after taking strychnine, which was prescribed by his physician, finds his sight had suddenly failed, apparently considering them as cause and effect. We are inclined to doubt if there is any relation between the two, because, as a matter of fact, strychnine is a tonic, and when given in proper doses strengthens the visual powers instead of weakening them.

But, at any rate, it cannot be considered as any alarming failure of vision when a weak concave lens raises the vision to $\frac{20}{100}$, and the usual convex lens enables the finest print to be read at 14 inches.

We are not given the symptoms of the case, if indeed the patient makes complaint of anything. Simply because a decided exophoria is found to exist, it does not follow that it must be corrected, unless the symptoms are such as to call for relief; and in the absence of definite information on this point, we are at a loss to formulate a plan of treatment.

It is scarcely conceivable that when the Maddox groove was placed over the right eye, the muscles could be balanced, when an exophoria of 17° is revealed by placing it over the left eye. Perhaps there was some fault in the operator's manner of questioning the patient, or some error of observation or statement on the part of the patient.

But if the exophoria was actually present, and if the symptoms seemed to call for its correction, we would not think of prescribing prisms to the full extent of the defect. We would not be justified in correcting more than one-half of the insufficiency, probably 4° prism over each eye for constant wear, with bases in.

An effort may be made at the same time to strengthen the convergence by exercise with prisms base out. As a starting point, we ascertain the power of convergence, or how strong a pair of prisms can be overcome with bases out, using a light of small size at a distance of 20 feet. The normal power of convergence ranges from 20° to 30°, but in this case it has probably fallen to 5°, or even less. We repeat the exercises from day to day, making the effort to gradually increase the prisms, in this way stimulating the innervation of the interni. It will probably be found that at each sitting a slightly-stronger prism can be overcome, and in ten days or two weeks of persistent exercise, the amplitude of convergence can probably be raised to normal.

"H. B."—*Young man, bookkeeper, twenty years old. Been wearing, R. +.50 sph. \ominus +.75 cyl. ax. 90°; L. +.50 sph. \ominus +.75 cyl. ax. 90°. My test gives R. +.75 cyl. ax. 90°; L. +.50 cyl. ax. 90°; V. = $\frac{20}{100}$ good. He came to me complaining of pain over right cheek, like a face ache or pain in the muscles. I tested his muscles and it required a 1° prism base up and in, axis 45°, to give him proper vision. This I added to the cylinders I gave him and he wore them three months; then he returned and he had heavy, dark rings around his eyes and said the pain had shifted to the left side of his face, and he could not use the glasses for working any length of time with comfort. I tested him again and got the same result; but (now comes the puzzling part) ten minutes after the test I tried him again and it required a 3° prism same axis to give him proper vision. This variation happened at three different tests. If there is such a thing as a spasm of the oblique muscles, I guess he must have it, as I can account for it in no other way. What can I do for him?*

From our correspondent's description of this case we are inclined to think his examination of the muscular balance was not made *secundum artem*. He tells us the cylinders he found from his test afforded vision of $\frac{20}{100}$ good, and then in the next few words he says that a 1° oblique prism was required to give him proper vision. We supposed that " $\frac{20}{100}$ good" was synonymous with "proper vision." If H. B. tried different prisms at different angles while his patient looked at the test letters, he was not employing the proper method of detecting and measuring a muscular anomaly.

When we come to investigate the muscular balance, there are three points to be determined:

1. Is there any error of muscle balance?
2. What is the nature of it?
3. What is the measure of it?

These points are all easily and quickly determined by the Maddox rod, which is placed usually in front of the left eye, or the eye with poorest vision, while the patient looks, not at the test letters but at a small point of light at the other side of the room. The right eye sees the natural light, while the left eye sees a narrow streak of red light. On account of the dissimilarity of the images, the function of fusion is temporarily suspended and, hence, if the streak and light do not occupy the same place, the first point is decided, viz., that a muscular anomaly does exist.

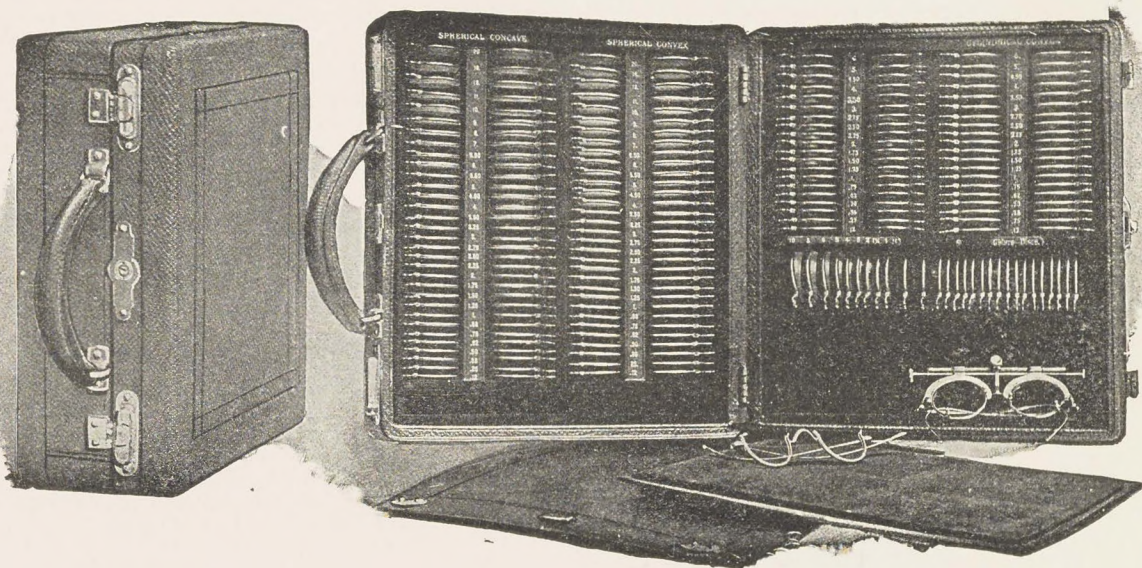
The position the streak assumes with reference to the light, will indicate the nature of the imbalance. If to the right or left, exophoria or esophoria; if above or below, right or left, hyperphoria, thus answering the second question.

The degree of prism required to bring the streak over the light, will indicate the measure of the defect and thus answer the third question.

If our correspondent will now re-examine his case along the lines we have laid down, he will be able to come to some intelligent conclusion as to the presence or absence of muscular anomaly and also as to the nature and measure of it.

But even though some such error of muscular balance is found to exist, it does not necessarily follow that prisms should be prescribed for its correction. Many times nature is able to take care of it, or the correction of the refractive error tends to restore the muscle balance, and, therefore, even in the face of heterophoria, we often find that prisms only cause discomfort and disturb vision.

Geneva Test Lens Cases are the Standard of Excellence



Our Catalogue, giving illustrations and full description of the various styles of Geneva Cases, sent on request.

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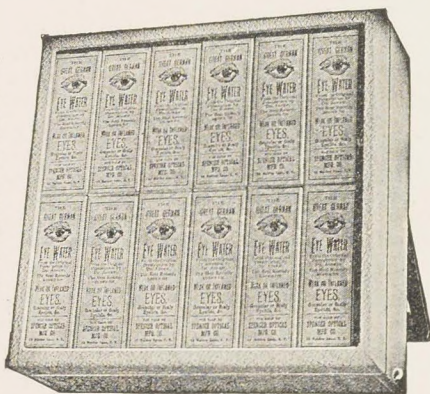
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(From the formula of Dr. Agnew) is the best, simplest and most effective preparation ever compounded, for inflammation of the eyes or eyelids, Conjunctivitis, Blepharitis or scaly eyelids, burning, smarting or itching of eyes. Its antiseptic properties destroy the germs and prevent acute inflammation. The phenomenal success of this Eye Remedy, has encouraged several opticians, (would-be) eye specialists and “home-made” Doctors to put upon the market Eye Remedies of divers kinds, and by extensive advertising attempt to divert the attention of the trade from a valuable Collyrium that has been used for years in nearly every hospital in the world, to remedies of which little is known, except by the advertisers, but the many opticians who have sold the German Eye Water for 20 to 25 years will attest to its value and recommend no other. Dr. Agnew's portrait is on every box. Get the original. Sold on its merits.

A handsome Show Case with your order for three dozen bottles. Also your special label on bottles if six dozen are ordered, and express paid to all parts of the United States. Price, \$1.63 per dozen, \$19.50 per gross. Order from your jobber or direct from the proprietor.

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ALL EYE WATERS OF ANY VALUE ARE EYE REMEDIES

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REFERENCES:

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Bifocal Lenses

Paper read before the Granite State Optical Association by
WALTER M. SLADE, of the Globe Optical Co., Boston.

BIFOCAL lenses are probably interesting the optician at the present time more than any other part of mechanical optics. They have been manufactured and used for more than a century, but, like other things, there were few improvements made for a great many years, and it was generally supposed that the common cement bifocal was the best that could be produced. Finally, Borsch invented the invisible bifocal and the idea of using flint glass and also the high price of this lens started a great many thinking, so that at the present time it seems as if every optician in the country was trying to place something new on the market.

To go into the history of bifocals a little, I find that Benjamin Franklin invented the first one in 1785, and this is known as the split bifocal. The first record of a patent, however, was in 1836, and there are several curves shown in the drawings, but as there was no description filed with this, I do not know how they were made.

The next was in 1839, and this is shown in the drawings to be something like a cement bifocal, with an oval wafer raised about 2 mm. from the lower edge. There was also no description filed with this, so I think that both these claims were filed to cover the shape rather than the construction.

Next, we find the whole bifocal was invented, and this is ground in one piece, but that was its only good feature. The great objection is that it is impossible to grind them without a prismatic power, and for this reason they should never be worn. There is also one other objection, and that is the curve must be opposite to that of a cement bifocal. Then, in 1867, the split bifocal was improved by grinding the straight edges on a bevel, so that the lower or reading part could be set in the frame angular, but I doubt if this was ever used to any great extent.

Continuous Improvement

In 1884 a bifocal was invented with a small, round reading part, about one-fourth inch in diameter. This could be made in cement, or a hole could be bored through the base lens and a small lens inserted and cemented. The idea of this seems to have been the size of the reading part rather than the shape or construction.

In 1887 the perfection bifocal was invented, and there are quite a few being used at the present time. These are ground by machine at the factories; but for opticians' use, we have a small composition stone, 1" diameter, which is the regular size, and 1¼" when a larger lower is desired. This is used to grind the upper curve, and then the lower is ground on a regular stone and fitted to it. An improvement on this style is the grooved Perfection, and these are interchangeable, so that a stock of lowers and uppers can be carried and any combination put together.

In 1891 there was a form of Perfection bifocal invented, but the lowers were set in toward the nose and also set at an angle for reading. These, also, are not common.

In 1885 a cement bifocal was invented, but with a half wafer shaped like the split. In 1888 the cement bifocal, with the regular-shaped wafer, now in use, was invented, and this is the most common at the present time, and it is the best of the low-priced ones. The wafers are made in many shapes, but the regular size is 26 x 13.

Trifocals and Quadrifocals

In November, 1805, there was a patent granted for trifocals and quadrifocals. These are for use in any case, when three or four different visions are required, but especially for shooting in sighting a gun. These can be made in several ways, such as cementing on a large wafer, than a smaller one on that, or by cementing wafers on both sides.

In looking over various patents, I find that in almost every case the inventor had in mind the idea of making a lens that would be comfortable to the wearer by changing in some way the line of demarcation. But in every case, except the cement, the only change that was made was the idea of lowering this line so as not to interfere with the distant vision. An example of this is the advantage of the Perfection over the split, whereas the line of demarcation is the same. As I stated before, the cement bifocal has been accepted as the best form of bifocal; but the objection to this style is that the cement is liable to start when worn near heat, or from too close contact with the face, and if dropped. There was also the objection that is common with all old styles of bifocals, and this is that although the line had been improved, it still had not been wholly eliminated. It was not so hard to get used to them, still it took several weeks in a great many cases. After all these improvements the public still refused to wear them, as it gave away their age and people would not sacrifice this point for the sake of convenience.

The Invisible Bifocal

These last two objections were probably responsible for the Invisible or Kryptok bifocal.

This was invented by John L. Borsch, of Philadelphia, in 1899, and they were made by him for some years before they attracted much attention. The reason for this was probably due to the high price. He finally sold exclusive rights to manufacture these lenses all over the country, and this brought them before the public.

The Kryptok, which, by the way, is derived from the Greek words meaning "invisible bifocal," is made from three pieces—namely, a base lens, a segment and a thin plate. For the base lens and plate, crown glass is used, either B. & L. stock, with an index of 1.522, or A. O. Co., with an index of 1.507. The segment is made from a glass with a higher index, usually flint, and, although this can be obtained in almost any index, about seven or eight different kinds are carried in stock with indices from about 1.54 to 1.76. It would be possible to grind all combinations with one kind of glass, but we would then be obliged to grind very weak or very strong curves. If the curve is too weak, the wafer is so thin that it cannot be handled without chipping, and if too strong, the lens would be too thick. Now, by having several kinds of glass, we can keep the curve very near at 10 D., which is the best working form. This glass is imported, and it comes in large pieces about four inches square and it is sawed in slabs about 2 mm. thick with a diamond saw and then cut in pieces about 20 mm. square. To illustrate the process of grinding, we will take, for example, a prescription, as follows:

Distance + 2.00 \odot + 0.50 ax. 90.
Reading, add + 2.00. For the base, we select a lens with the outside curve + 2.00, and this is blocked on the corner on a very small block, and in this corner we grind a depression — 8.75. We then select a piece of flint glass with an index of about 1.633, as this we know will add + 2.00 if ground on a 10 D. curve, and grind a + 8.75 to fit the depression in

the base. This is then cemented in, and we block it on a regular block and grind it off with a + 1.25. This curve is used instead of plano, as they cement better and it brings the wafer to a sharper edge. We now have the right curve on the wafer, as the + 1.25 added to + 8.75 makes the 10 D. The segment is then removed from its depression and cleaned carefully. This, of course, is the delicate part of the work and the smallest chip will spoil them, as they have to be used just as they come from the surface tool and cannot be edged on the grindstone. For the plate, we take a + 0.50 cylinder and on the other side we grind a — 1.25 to fit the + 1.25 ground on the inside of the base. After all these parts have been thoroughly cleaned and are found to be free from scratches, they are cut to size, put together and cemented very slowly by electric heat, taking from three to six hours. They are then edged very carefully on a composition stone and drilled ready for mounting. This takes considerable time, as they have to be fitted very carefully and not tight enough to start the cement, and finally cemented into the straps. This will probably explain why the prescription cannot be filled the same day as received.

Varieties of Bifocals

A few months after obtaining a patent on the Kryptok, Mr. Borsch was granted another patent for the same lens without the top plate. This is called the Depressed and is considerably cheaper than the Kryptok, but nowhere near as invisible. The object of this patent probably was to protect the Kryptok, as they had never recommended them and few have been sold.

Now, these lenses have overcome the previous objections to bifocals, as the wafers are practically invisible and the lines almost eliminated, so that people who formerly could not use bifocals, could wear them with comfort. Although Mr. Borsch was able to overcome these previous objections, he created new ones, and those are the high price and the selling of exclusive right for their manufacture. These, again, were the cause of more experimenting to produce a lens cheaper and perhaps just as good, and also something that could be sold in competition by those that could not sell Kryptoks in their territory.

Among the first of these was the new bifocal, manufactured by the Globe Optical Company, of Boston, and a similar bifocal, called the Non-apparent, manufactured by Wheaton & Bowers, of Worcester. These were both placed on the market about a year ago, and later Mr. Bowers obtained a patent on the process. These have been made only in a small way up to the present time. First, we wished to see if the public and the trade appreciated the advantages of this lens and would pay for the increased cost to manufacture. Also, to look into the validity of the patent. The validity of the patent being established and the trade finding that the public demanded something better than the regular cement, the Globe Optical Company has secured the exclusive rights to manufacture them in New England.

A Popular Bifocal

This lens consists of a base lens and an extremely thin wafer, so thin that it cannot be handled by hand. It is ground on a special block very carefully to a diameter of 18 mm., and then in some cases transferred from this block directly to the surface of the base lens, and in others to another lens and from this to the base lens. This operation depends on the power of the wafer, as the weak ones are very much harder to grind than the strong ones. The cementing is done on an electric heater, much slower than an

(Continued on page 673)



$\frac{1}{4}$ Gold

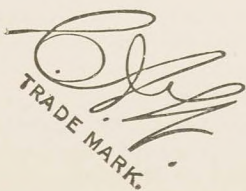
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Bifocal Lenses

(Continued from page 671)

ordinary cement bifocal. This process, together with the extreme thinness of the wafer, almost eliminates the troubles of all cement bifocals, the Kryptok included. The Globe Optical Company has such perfect faith in this feature that they will re-cement them without charge. The lenses are made with the top of the wafers set 1 mm. below the center of the base lens, and this gives them that horseshoe shape similar to the Kryptok. This lens seems to be the most practical of them all, as it is invisible as any and yet costs less than one-half what others cost. They can be sold for from \$4 to \$5 per pair in sphericals, and at this price they sell readily to those that can afford to pay a little more than the regular price, and also to those that will not pay the price of Kryptok. It also costs less to repair them, and then again the wafers can be changed at any time without making practically a whole new pair.

The next was the Bisight, patented by Mayer, of Baltimore, on August 29th. This lens is an improved whole bifocal, being ground in one piece. This lens is ground by special machinery and so I do not know exactly the process.

The next was the Bell bifocal, patented November 28th, and as this is so recent, they are hardly on the market as yet. This differs from the Kryptok, inasmuch as it consists of two pieces instead of three. The base lens is made with a lenticular convexity in the shape of a wafer. It is made of glass with a higher refractive power and resembles the top plate and the wafer of the Kryptok, if they should be made in one piece. This part has to be ground by automatic machinery, and even then it is impossible to grind it without the marginal aberrations, common with the whole bifocal. If this was possible, this lens would be good enough as it is. But to overcome this defect a cover plate is ground, which is exactly like the base lens of the Kryptok. These are cemented with a specially prepared bifocal cement of the same refractive index as the base lens, and this fills all the local inequalities. This lens, you will see, has practically the same amount of labor, and to all appearances is about the same as the Kryptok. The advantage claimed over the Kryptok is that it is more invisible. This may be so, for the reason that the part having the higher index covers the whole of the other part; while in the Kryptok, the whole lens is of one index and the wafer only is of a higher index. There is also another claim, that

with this special cement it does not take as long to cement the lenses and that it is less liable to give trouble.

The last lens placed on the market is the Aplanatic, made by the Spencer Optical Company. This is not a patented lens, and it consists of a base lens and a round wafer, about 12 mm. diameter, of ordinary thickness. These lenses cost about 15 cents a pair extra in spherical and 65 cents in compounds.

The Latest Improvement

The lens to be placed on the market in the near future is the most radical departure from the other styles of bifocals as it requires no cement, and although it is made of two pieces, it is one piece when finished. This is the

the preliminary organization that has been formed. The name of the new body is the Wyoming Optical Association, and the co-operation of all the opticians in the State has been solicited by circular. The new association will be affiliated with the American Association of Opticians.

Optical Store with Ideal Equipment

Among the names most intimately associated with the optical industry in the United States is that of E. B. Meyrowitz. The Meyrowitz enterprise has manifested itself in many ways, notably in the extension of a chain of handsome retail optical establishments in New York, Paris, Minneapolis and St. Paul, now six in number, all foremost in their particular field, well appointed and well managed. The last link in this chain, the store in St. Paul, Minn., has recently shown such satisfactory growth that facilities have been doubled by leasing an adjoining store, the interior of the two being shown in the accompanying photograph.

The store has been entirely remodeled and refitted throughout with elaborate mahogany furniture, massive show cases and cabinet work, with modern appointments for the comfort and convenience of patrons. The attractive frame-fitting tables, the carefully-planned decorative scheme augmented by four tastefully-dressed windows, all add to the attractive arrangement. Located upon one of St. Paul's busy thoroughfares, at 358-360 St. Peter Street, it is one of the leading optical establishments of the Northwest. In its equipment it affords pleasing evidence of the wonderful progress made in recent years in optical science and industry.

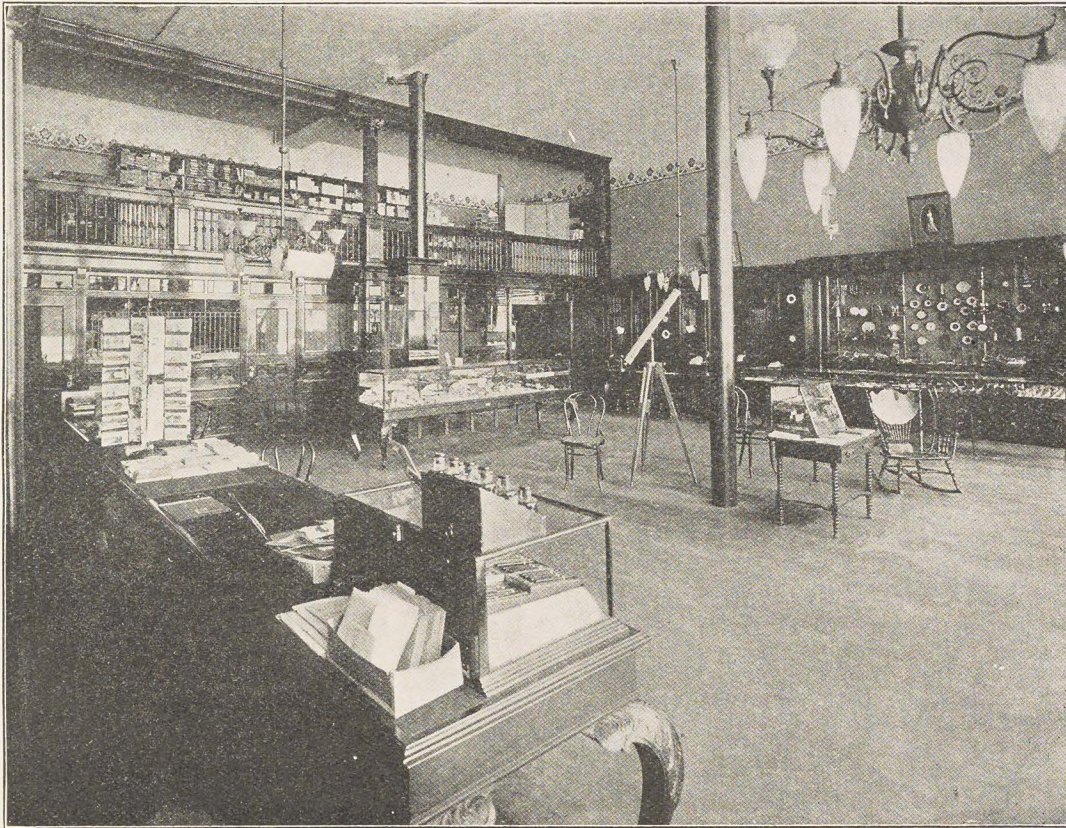
Buffalo Optical Society

The annual meeting of the Buffalo Optical Society was held in the Y. M. C. A. Building, Wobaw and West Genesee Streets, Buffalo, N. Y., on Friday evening, March 2d, when the following officers were elected: President, J. P. Simcox; first vice-president, Julius Hauser; second vice-president, C. F. Cushing; secretary, E. V. Sycher, 11 Genesee Street, Buffalo; treasurer, H. B. Wickins; members of executive committee, R. F. Williams and L. A. Aldrich.

The sum of \$25 was contributed to the Optical Society of the State of New York for legislative purposes. The next meeting of the Buffalo Society will be held at the Genesee Hotel on April 5th.

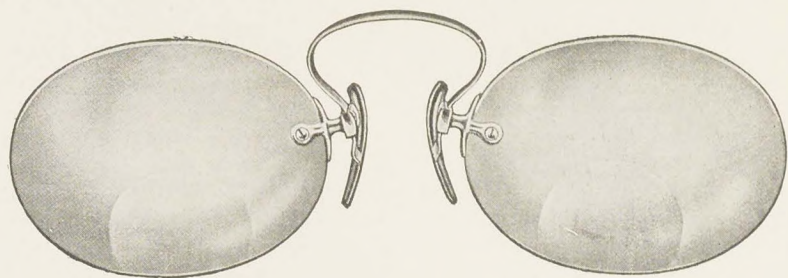
Wyoming Opticians Organize

The nucleus of an optical organization has been formed in the State of Wyoming, where the movement owes its inception to W. P. Service, of Sheridan, who is acting president and secretary to



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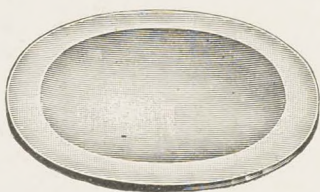
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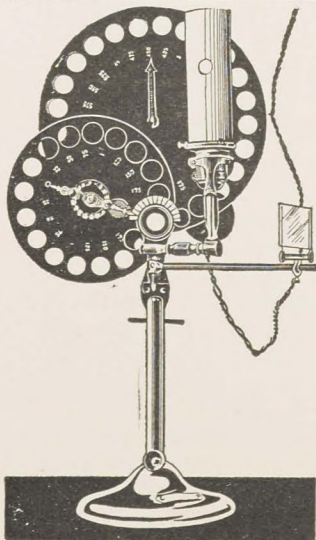
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[Each of these clinics is complete in itself, and one of them is published each month in this department. They cover all manner of eye defects, from the simplest to the most complicated, and give the most authoritative procedure in the diagnosis and correction of the various visual defects. In order to make these clinics of maximum benefit, we invite our readers to join in them by sending us any criticisms or suggestions they may have to make in regard to the treatment here given. The first clinic of the series appeared in the May, 1904, issue.—ED.]

A Case of High Myopia

E. C. is a school girl, aged eleven years. She holds everything very close to her eyes and is unable to see the blackboard in school. Her father tells us she has been wearing glasses for the past six years. We neutralize them and find them to be — 5 D. spheres. This girl, as you see, is a delicate-looking child, but makes no complaint other than her inability to see clearly.

As might be expected, she is unable, without glasses, to see any of the letters on the test card hanging across the room. We ask her to approach the card slowly, and when about eight feet from it she is able to name the large letter at the top. We therefore record her visual acuity as $\frac{8}{200}$.

We ask her to return to her chair, and testing each eye separately with concave lenses, we find for right eye — 12 D. affords a vision of $\frac{20}{100}$, and for the left eye — 18 D. the same acuteness of vision.

This, then, is a case of high myopia, a very serious condition of refraction for the patient, and possessing many points of interest to the optometrist.

This is the one error of refraction in which an ophthalmoscopic examination is of the highest importance, in order to determine the condition of the interior of the eye, and the presence of the myopic crescent, choroidal atrophy, macular disease, opacity of the vitreous humor or other accompaniments of staphyloma.

Myopia, as you all know, is ordinarily due to excessive length of the antero-posterior diameter of the eye, and we are able to estimate pretty accurately the amount of lengthening by the number of the lens required to correct the myopia, according to the following standard, that every 3 D. lens represents very closely one millimeter of lengthening of the antero-posterior diameter of the eye.

In this little girl's case, the lenses just accepted would indicate 4 mm. of lengthening in the right eye, and 6 mm. of lengthening in the left eye.

Inasmuch as hypermetropia is regarded as an imperfectly developed condition, so it might seem fair to look upon the myopic eye as one that had undergone excessive development; but the fact of the matter is that in the vast majority of cases, the excessive length is due, not so much to overgrowth as to stretching and distention of the ocular coats.

Much discussion has occurred as to how this stretching has been caused, and the various theories that have been advanced are divisible into two general classes:

1. Those which attribute the deleterious effect to the prolonged exercise of the accommodation.

2. Those which attribute this effect to the convergence.

The supporters of the first theory argue that the intra-ocular pressure is increased during accommodation, and that distention of the sclerotic is due to the long continuance of this abnormal pressure; that the act of accommodation causes traction to be exerted upon the choroid, thereby giving rise to chronic inflammatory changes with subsequent atrophy and thinning of the choroid and sclerotic; that spasm of accommodation is an important factor in the causation of myopia.

All of these have been denied, and a potent argument against the accommodation theory lies in the fact that there is no increase of refraction in those eyes where the accommodative effort is the greatest, namely in hypermetropia.

I am inclined to regard the influence of the convergence upon the shape of the eyeball as of more importance than the accommodation. When the internal recti are strongly contracted in the function of convergence, the external recti closely bind the outer halves of the balls, and at the same time the two obliques must increase their effort in order to prevent the balls from sinking back into the orbits. The pressure upon the eyes is thus increased and traction made upon the posterior part of the sclerotic by the oblique muscles.

These efforts of accommodation and convergence are common to all who use their eyes for close work, but as a matter of fact only a certain proportion of them become myopic, and therefore it is necessary to assume the existence of a predisposing cause in those eyes which do become elongated.

A large broad skull and a great inter-pupillary distance, render convergence more difficult and thus present a predisposing element.

Heredity is another predisposing factor to myopia; this does not mean that the babe is born myopic. On the contrary, the eye is very likely to be hypermetropic at birth, but what the child inherits is a tendency to myopia on account of weakness of the coats of the eye or a subnormal resisting power of the sclerotic. Such eyes give way under a strain that would be harmless to a strong-coated eye.

So great is the elongation in the higher grades of myopia that the sclerotic is reduced to extreme thinness, and on account of the underlying choroid it assumes a bluish tint. This protrusion backward of the myopic eye is termed posterior staphyloma.

The *conus* is a whitish crescent (known as the myopic crescent) found at the border of the optic nerve; or instead of being crescent shaped, it may entirely surround the optic disk. This is due to stretching and atrophy of the choroid, allowing the white sclerotic to show through. The presence of a conus may be regarded as evidence of congenital deficiency in the resisting power of the sclerotic.

We will now return to our case and make a more careful and thorough test with the trial lenses; but before doing so we will call the ophthalmometer to our aid to determine the presence or absence of astigmatism. This instrument shows an excess of curvature in the vertical meridian of 2.50 D. in the right eye, and 1.50 D. in the left. This indicates astigmatism with the rule, and if a concave

cylinder is called for the axis would be placed at 180°.

We place a — 10 D. in front of the right eye, and hold before it alternately a — 1 D. sphere and a — 1 D. cylinder with axis at 180°. This sphere is preferred as affording the better vision. We now place a — 11 D. in the trial frame and repeat the process. We keep on along these lines until finally we get — 13 D. \odot — 2 cyl. axis 180° as the best combination we can find, with which our little patient is able to name some of the letters on the No. 60 line.

We repeat the test in the same way with the left eye, taking plenty of time and exercising great patience, with the following result: — 16 D. sph. \odot — 1 cyl. axis 180°, with which vision equals $\frac{20}{80}$.

This is certainly a high degree of myopia, and we must be on our guard not to tax the eye by giving the glasses too strong. Therefore we will slightly reduce the sphere and order as follows:

O. D. — 12 D. S. \odot — 2 cyl. axis 180°.

O. S. — 14 D. S. \odot — 1 cyl. axis 180°.

These glasses can be worn only for distance, while for reading we will have to modify the glasses according to the following rule: Subtract from the glasses representing the full measure of the defect those glasses the focus of which represents the distance at which the patient desires to read or work.

Now the usual reading or working distance is 13 inches, and the glass representing this distance is 3 D. and therefore this is the amount that is subtracted from the distance lenses, which would make the prescription for reading glasses as follows:

O. D. — 9 D. S. \odot — 2 D. cyl. axis 180°.

O. S. — 11 D. S. \odot — 1 D. cyl. axis 180°.

A child of this age cannot be expected to change her glasses from time to time as she may be looking near or far, and therefore we will suggest to her parents that these reading glasses be worn constantly while at school and at play, and that the distance glasses be reserved for the church or theater, or when she makes some special visit where her best vision may be desirable.

We will make our usual test of the muscle balance by means of the Maddox rod, and find 15° esophoria and 1½° left hyperphoria. This is somewhat unexpected, as ordinarily esophoria is associated with hypermetropia, while a myopic condition of refraction gives rise to a divergence of the visual axes, which may show itself simply as an exophoria or as an actual divergent squint.

This departure from parallelism of the visual axes is due to the disturbance of the relations that should normally exist between accommodation and convergence. In myopia there is little or no need of the accommodation in near vision, but the convergence must be used the same as in an emmetropic eye. The convergence is then used in excess of the accommodation, which leads to fatigue of the internal recti and finally insufficiency.

Or looking at the matter in another light: accommodation and convergence are used in equal proportion in the normal eye, and each function receives the same nervous impulse causing an equal effort. Now, in myopia the divergent rays from near objects are focused on the retina with little or no accommodative effort. For this reason there

(Continued on page 677)



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Clinics in Optometry

(Continued from page 675)

is no call for innervation of the ciliary muscle, and consequently the innervation of the internal recti is lessened or checked to an equal degree. Thus relaxation of these muscles is produced, and the eye under the control of the stronger external recti turns outward.

In this case, however, instead there is a decided convergence of the visual axes, showing that the normal relation that should exist between the accommodation and convergence has been destroyed or disturbed. We feel as if some attention should be given to this imbalance of the muscles, but on account of the strong concave curves that are called for, we hesitate to order prisms in combination. How, then, can we obtain the desired prismatic action? By decentration.

As soon as we look through a lens at any place except its actual optical center, the prismatic effect of the lens is brought into action. If the lens is weak and the curvatures slight, the prismatic effect is inappreciable; but with the increase in power and curvature of the lens, there is a corresponding increase in prismatic action. In the case before us, where the lenses required are so strong, we can get very considerable prismatic power by decentration.

Now, is there any rule to guide us in this matter? Of course there must be, in order that we may know exactly what we are doing.

In the first place, a concave lens may be considered as made up of an indefinite number of prisms with their bases out. If such a lens is decentered outward, we get the effect of a prism base in; if decentered inward, a prism base out. In this case where esophoria is present, we want a prism base out, and therefore we must order the lenses decentered inward. Now the question occurs, how much shall they be decentered?

The rule is that for every decentration of one centimeter there will be as many degrees of prism as there are diopters in the lens. This means that a 1 D. lens decentered 1 cm. would produce a prismatic effect of 1° , and a 3 D. decentered 1 cm. a prismatic effect of 3° .

But on account of the small size of uncut lenses, a decentration of 3 mm is all that is possible, and therefore we had better word our rule in accordance therewith, as follows: a 1 D. lens decentered 1 mm. produces a prismatic effect of .1 D. ($\frac{1}{10}$), and a 3 D. lens decentered 1 mm. a prismatic effect of .3 D. ($\frac{3}{10}$). Inasmuch as the size of the lens limits the decentration to 3 mm., the amount of prismatic power it is possible for us to produce is $.3^\circ$ ($\frac{3}{10}$) for every 1 D. of refractive power.

In this case, where we have ordered — 12 D. for the right eye and — 14 D. for the left, we can produce 3.6° and 4.2° of prismatic power, respectively, or a total of 7.8° , almost 8° . As this is about one-half the amount of esophoria, and as this is about as much as we usually attempt to correct, you can easily see that a decentration in this case is of great practical value, and we will therefore order the lenses decentered inwards 3 mm.

Now, there was also $1\frac{1}{2}^\circ$ of left hyperphoria, which we can correct in the same way. For this purpose we want the effect of a 1° prism base down over the left eye. We get the effect of a prism base down by ordering the lens decentered upwards, and if it is decentered 1 mm. we get a prismatic effect of 1.4° , which is just about what we want.

In considering the treatment of a case of high myopia like the one before us, the question of the removal of the crystalline lens, which has recently been advocated, presents itself. Theoretically, this is a beautiful plan of treatment, as in this way the excessive refraction can be very materially reduced, but it does not appeal very strongly to the average patient, and therefore it is scarcely likely to become very popular.

Hundreds of cases of removal of the crystalline lens have been reported in Europe and especially in Germany. So far, this country has furnished very few cases; one reason for which may be found in the fact that we give more attention to the careful and painstaking correction of errors of refraction than do the European optometrists.

While on this subject, it is interesting to consider the amount of myopia that would be suitable for operation. The least degree of myopia in which extraction of the lens is permissible is about 12 D. Of course, the higher the degree, the greater might be considered the need for operation. But at the same time, in the higher degrees of myopia, the accompanying posterior staphyloma impairs the integrity of the coats of the eye so greatly that the operation is attended with serious risks, such as hemorrhage and detachment of the retina.

A condition approximating emmetropia may result from extraction of the lens in myopia, varying from 12 D. to 20 D. This case would be included in this class, if the conditions demanded operation; but with a vision as good as this child enjoys, we would not think of advising operative procedure.

As you have noticed the best vision we have been able to obtain in this case is $\frac{2}{60}$ partly, and this leads me to say that in the higher grades of myopia, it is impossible to raise vision to normal by any lens. This, perhaps, may be comforting knowledge to some of you who have vainly tried to find a lens or a combination of lenses that would afford a vision of $\frac{2}{60}$ in the highly myopic cases that have come under your care.

There are two reasons for this:

1. The impaired integrity of the retina.
2. The diminishing effect of strong concave lenses.

Either one of these would suffice to account for the lessened vision, while the two together only serve to make it more pronounced.

You can easily understand that the great bulging and stretching of the coats of the eye, causes the rods and cones of the retina to be separated. The diminution in the size of the image by a strong concave lens is very marked, therefore this smaller image impresses fewer of the rods and cones, and there can be no wonder that the vision is not capable of being raised to normal. Indeed, the wonder rather is that we are able to afford as good a vision as we do with the strong concave lenses we are compelled to prescribe.

Breakages

Every one who wears a frameless glass looks for it to break, and when it does happen the first thought that comes to mind is, how can I get this repaired gratis and what excuse can I make that it is the manufacturer's fault? Finding nothing plausible, the next step is to send it to the maker, saying: "This was screwed too tight," and take a chance whether he is "easy" or not. If not, of course they pay. Now, from an experienced standpoint allow us a few words which may help all concerned. Frameless glasses are, to say the least, treacherous. Custom has ordained that they must be fitted tight; that the strap must come down firmly on the glass and show no space between the two. This is good work, but liable to be dangerous. Glass is one of the most sensitive substances to the changes of temperature that is known, and the expansion under certain conditions is liable to produce a crack.

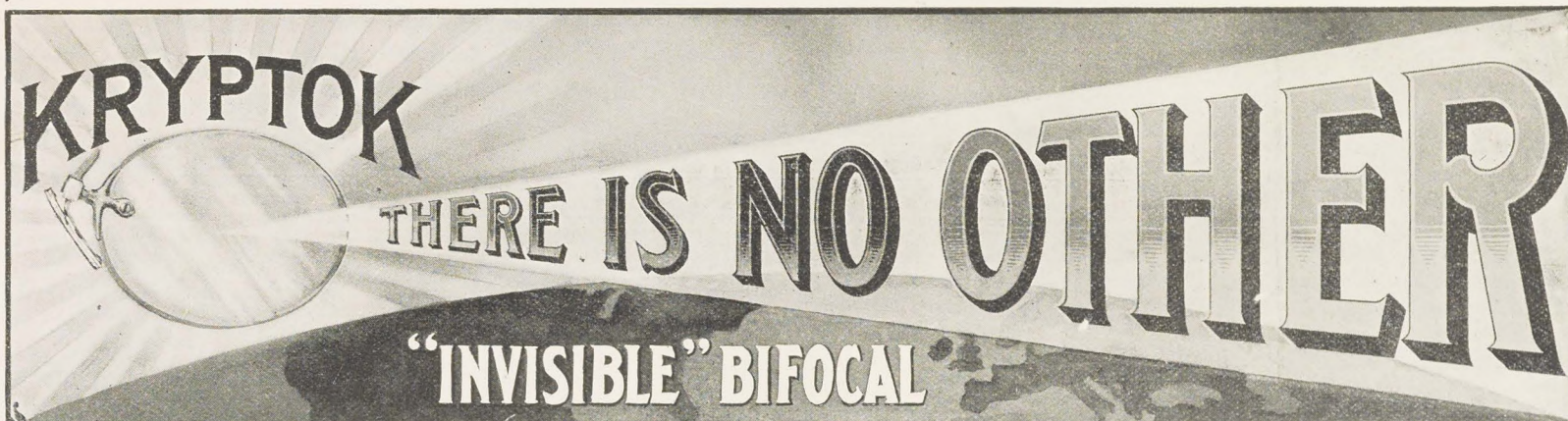
Retiring at night we lay our frameless glasses on a marble stand. If they are not cracked in the morning we are fortunate. Sometimes the workman, desiring to make a nice job, does fit them too tight, but this is an exception. The cracks and sudden breaks that occur generally come from causes that no one is to be blamed for, and must be classed as one of the risks taken in wearing frameless glasses. As a house we are extremely careful in sending out glasses of this make and rigid examination will break any defective lens before it leaves us. And while we are always inclined to be generous, we feel that it is fair for us to say that we cannot be responsible for frameless breakage unless it is returned within twenty-four hours from the time it has been delivered by us. Were the prices for work high enough to allow us to warrant work indefinitely we would be only too glad to do it, but unfortunately they are not.

—Brown's Own Idea.

A Curious Experiment

Take a piece of pasteboard about five inches square, roll it into a tube with one end just large enough to fit around the eye, and the other end rather smaller. Hold the tube between the thumb and the finger of the right hand (do not grasp it with the whole hand); put the large end close against the right eye, and with the left hand hold a book against the side of the tube. Be sure and keep both eyes open and there will appear to be a hole through the book, and objects seem as if seen through the hole instead of through the tube. The right eye sees through the tube and the left eye sees the book, and the two appearances are so confounded together that they cannot be separated. The left hand can be held against the tube instead of the book, and the hole will seem to be seen through the hand.

"I am most interested in the optical department of *The Keystone*, as a whole—*Optical Questions and Answers*. I read questions, determine what I would do in each case and then compare with your answers. I am often surprised at the agreement of results so reached."—C. M. Parker, Optician, New Haven, Connecticut.



SINCE the advent of the KRYPTOK LENS it would seem that all bifocal lenses must be called "invisible" whatever they are in fact.

KRYPTOK invisibility means that when the lens stands before the wearer's eye there is no line, nor ridge, nor any other evidence of a divided lens to hinder clear, unobstructed vision, near and far. There is no substitute for the KRYPTOK "Invisible" Bifocal Lens.

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A. S. ALOE CO., 513 Olive Street, St. Louis. MISSOURI.
ARKANSAS, LOUISIANA.
JOHN L. BORSCH & CO., 1324 Walnut Street, Philadelphia.
PENNSYLVANIA, DELAWARE, NEW JERSEY.
CHINN-BERETTA OPTICAL CO., 991 Market Street, San Francisco. CALIFORNIA.
ALMER COE, OPTICIAN, INC., 74 State Street, Chicago. ILLINOIS, WISCONSIN, IOWA, MICHIGAN.
COLUMBIAN OPTICAL CO., Denver, Salt Lake City and Omaha. TEXAS, MONTANA, NEBRASKA, KANSAS, COLORADO, UTAH, OKLAHOMA, WASHINGTON and OREGON.

ECKLEY OPTICAL CO., Memphis, Tenn. TENNESSEE.
F. H. EDMUNDS, Washington, D. C. DISTRICT OF COLUMBIA.
CHAS. A. EUKER & CO., 312-314 Howard Street, North, Baltimore, Md. MARYLAND.
E. KLEIN & BRO., 435 Race Street, Cincinnati. OHIO.
ANDREW J. LLOYD & CO., 323 Washington St., Boston. MAINE, NEW HAMPSHIRE, VERMONT, MASSACHUSETTS, RHODE ISLAND.

E. B. MEYROWITZ, 104 East 23d Street, New York; 604 Nicollet Avenue, Minneapolis; 360 St. Peter Street, St. Paul. NEW YORK, CONNECTICUT, MINNESOTA, NORTH and SOUTH DAKOTA.
JOHN L. MOORE & SONS, Atlanta. GEORGIA.
WEDEKIND OPTICAL CO., Louisville, Ky. KENTUCKY.
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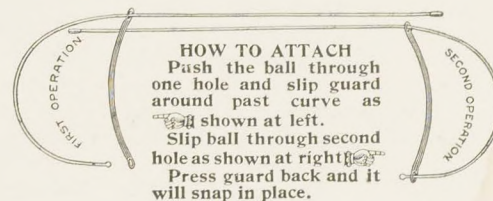
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An optician wrote and asked me how to attach

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There is a little trick in this, and the above illustration shows it. Any optician who wishes small printed cards like the one above illustrated can have them free of charge from me in Spanish and English.

Always show your customer how to attach and remove the **Guards** without bending them, so he or she can remove and clean them when dust settles in them.

Don't forget to drop a postal for a window card, if the one you are using is dusty, write for a fresh, clean one.

These window cards are lithographed in seven colors, and they are of a novel design that attracts attention and brings **other opticians' customers into your store**. I am sending them to Canada, Cuba and Mexico—but very few to New York.

Why don't New York opticians read the **Ear Guard News** each month in **THE KEYSTONE**? Look up my name in the index the last six months.

A. A. Laforest, Manufacturer
St. Louis, Mo.

Optical Organizations

NATIONAL

American Association of Opticians (1898)

B. B. CLARK, President, Rochester, N. Y.
WM. E. HUSTON, Secretary, Kansas City, Mo.
Meets annually. Next meeting to be held in Rochester, N. Y., August 6, 7, 8 and 9, 1906.

Worshipful Company of Spectacle Makers (England) (1629)

RT. HON. LORD BURNHAM, M.P., K.C.V.O., Master.
COL. T. DAVIES SEWELL, F.R.A.S., Clerk, 9 Temple House, Temple Avenue, London, E. C., England.

British Optical Association (1895)

M. W. DUNSCOMBE, F. B. O. A., President.
J. H. SUTCLIFFE, F.R.S.L., F.B.O.A., Secretary, 17 Shaftesbury Avenue, London, W., England.

Canadian Association of Opticians (1896)

F. E. LUKE, President.
H. J. GEIGER, Secretary and Treasurer, Toronto.

Scottish Optical Association (1903)

JAMES CHALMERS, President, Springburn, Glasgow.
D. L. MURRAY, Secretary, 621 Duke Street, Glasgow.

The Australasian Optical Association (1904)

H. A. BARRACLOUGH, B. O. A., President.
A. A. C. COCKS, B. O. A., Secretary, Sydney, N. S. W.

Phi-Omicron Fraternity (1904)

JOHN C. EBERHARDT, President.
C. S. HART, Secretary, Lynn, Mass.

The Optical Specialists' Association of America (1904)

J. C. CLARK, President, Sioux City, Iowa.
G. E. BOYCE, Secretary, Waterloo, Iowa.

American Association of Wholesale Opticians (1893)

J. T. BRAYTON, President, Chicago, Ill.
A. REED MCINTIRE, Secy., 723 Sansom St., Philadelphia, Pa.
Next meeting in New York, in 1906.

INTERSTATE

New England Association of Opticians (1894)

ALBERT A. CARTER, President, Boston, Mass.
G. A. BARRON, Secretary, 3 Winter St., Boston, Mass.
Meets third Tuesday of each month, except July and August.
Annual meeting and exhibit, Boston, Mass., May 15 and 16, 1906.

Northwestern Optical Association (1901)

EDWARD W. GREVISH, President, Minneapolis, Minn.
F. J. PRATT, Secretary, 415 Robert Street, St. Paul, Minn.

STATE

Pennsylvania Optical Society (1895)

H. E. HERMAN, President, Williamsport, Pa.
C. A. LONGSTRETH, Secretary, 228 Market St., Phila., Pa.

New York State Optical Society (1896)

W. W. BISSELL, President, Rochester, N. Y.
ROGER F. WILLIAMS, Secretary, 455 Main St., Buffalo, N. Y.

Indiana Optical Society (1896)

J. H. ELLIS, President, South Bend, Ind.
MISS MARGARET J. ERISMAN, Secretary, Lafayette, Ind.

Michigan Society of Optometrists (1896)

P. SCHOLLER, President, Hancock, Mich.
E. EIMER, Secretary and Treasurer, 105 Western Avenue, Muskegon, Mich.
Annual meeting, Detroit, August 3 and 4, 1906.

Iowa Optical Society (1897)

E. F. RENAUD, President, Keokuk, Iowa.
B. M. BILLS, Secretary, Vinton, Iowa.

Illinois Optical Society (1898)

GEORGE A. ROGERS, President, Chicago, Ill.
O. J. HALBE, Secretary, Room 1616, 42 Madison St., Chicago.

California State Association of Optometrists (1899)

W. A. MEYER, President, Sacramento, Cal.
H. W. CLARK, Secretary, San Francisco, Cal.

Washington Association of Opticians (1899)

H. CLAY EVERSOLE, President, Seattle, Wash.
LEANDER BUTT, Secretary, 715 First Ave., Seattle, Wash.

Granite State Optical Association (1900)

L. E. WHITE, President, Concord, N. H.
W. E. BURPEE, Secretary, Manchester, N. H.
Meets third Wednesday of January, March, May, September and November.

Wisconsin Association of Optometrists (1900)

A. J. STOESEL, President, Milwaukee, Wis.
E. E. THOMAS, Secretary, Milwaukee, Wis.
Next Meeting, Racine, July, 1906.

North Carolina Optical Society (1900)

F. W. MAHLER, President, Raleigh, N. C.
SAMUEL RAPPORT, Secretary, Durham, N. C.

Minnesota Optical Association (1900)

J. W. BROWN, President, Ortonville, Minn.
C. A. SNELL, Secy., 608 Nicollet Ave., Minneapolis, Minn.

Maine Association of Opticians (1901)

A. M. WENTWORTH, President, Portland, Maine.
ROBERT B. SWIFT, Secretary, Portland, Maine.

Tennessee Optical Society (1901)

H. J. COOK, President, Knoxville, Tenn.
GEO. R. CALHOUN, Secretary, Union and Summer Sts., Nashville, Tenn.

Colorado Optical Association (1901)

R. B. FINCH, President, Denver, Colo.
R. H. BIEGEL, Secretary, 636 Sixteenth St., Denver, Colo.
MISS E. H. CHAPMAN, Cor. Secy., 1655 Welton St., Denver, Colo.

Kansas Association of Opticians (1901)

F. W. HUNT, President, Burlingame, Kans.
H. T. CORSON, Secy. and Treas., Kansas City, Kans.

Missouri Association of Opticians (1901)

C. M. WHEELER, President, Columbia, Mo.
ELMAR H. SCHMIDT, Secy. and Treas., Washington, Mo.
Next meeting, May 8, 1906, in Kansas City.

Virginia State Optical Association (1902)

W. WATY ROYALL, President, Martinsville, Va.
E. S. GREEN, Secretary, Roanoke, Va.

Ohio Optical Society (1902)

F. W. WALLIS, President, Columbus, Ohio.
EDWIN L. JONES, Secretary, Sandusky, Ohio.

Kentucky Optical Society (1902)

L. J. BACKUS, President, Louisville, Ky.
A. S. REEVES, Secretary, Winchester, Ky.

North Dakota Optical Association (1903)

A. O. WOLD, President, Langdon, N. Dak.
W. R. BLAKELY, Secretary, Grafton, N. Dak.

New Jersey Optical Society (1903)

FREDERICK H. HEWLETT, President, Paterson, N. J.
J. J. HARTMAN, Secretary, 16 Howard St., Newark, N. J.

South Dakota Optical Association (1903)

WILLIAM H. FRITZ, President, Sioux Falls, S. Dak.
D. G. GALLETT, Secretary, Aberdeen, S. Dak.

Texas Optical Association (1903)

WEST CATHCART, President, Galveston, Texas.
B. R. STOCKING, Secretary, Belton, Texas.

Rhode Island Society of Optometry (1903)

W. J. DAVIS, President, Woonsocket, R. I.
G. FREDERIC BEANE, Secretary, 413 Main Street, Worcester, Mass.
Meets second Monday of each month.

South Carolina Optical Society (1903)

W. E. AVERY, President, Columbia, S. C.
M. R. ABBE, Secretary, Columbia, S. C.

Quebec Optical Association (1904)

R. DE MESLE, President.
P. G. MOUNT, Secretary, cor. St. Denis and Dorchester Sts., Montreal, Quebec.

Georgia State Optical Association (1904)

C. E. FOLSOM, President, 28 Whitehall St., Atlanta, Ga.
C. H. KITTRELL, Secretary, Dublin, Ga.

Opticians' League of the State of New York (1904)
(Dispensing Opticians)

E. B. MEYROWITZ, President, New York City.
A. SHAW, Secretary, 1145 Broadway, New York City.

Louisiana Optical Society (1905)

LOUIS CLAUDEL, President, New Orleans, La.
S. P. SCHUESSLER, Secretary, Baton Rouge, La.

Nova Scotia Optical Society (1905)

A. C. WHITEKER, President, Halifax, N. S.
G. A. BURRIDGE, Secretary, Halifax, N. S.

New Mexico Association of Optometrists (1905)

OTTO G. BEBBER, President, Albuquerque, N. Mex.
GEO. F. EVERETT, Secretary, Albuquerque, N. Mex.

Nebraska Optical Society (1906)

C. C. MCLEES, President, Davenport, Nebr.
J. H. HUKILL, Secretary, Lincoln, Nebr.

LOCAL

New York City Optical Society (1897)

OTTO OFFENHAUSER, SR., President.
ALBERT COHEN, Rec. Sec., 81 Fulton Street, New York.
Meets second Wednesday of each month.

Rochester Optical Society (1897)

HARRY M. BESTOR, President, Rochester, N. Y.
C. I. SUMERISKI, Secretary, Rochester, N. Y.

Utica Optical Club (1901)

RICHARD PERLEN, President.
C. T. EVANS, Secretary, Utica, N. Y.

Chicago Optical Society (1902)

J. ROSE, President, Chicago, Ill.
F. H. KREITZ, Secretary, care C. D. Peacock, State and Adams Streets, Chicago, Ill.

Niagara District Optical Society (1902)

JONAS HOUSE, President, Welland, Ont.
F. G. DUNLOP, Secretary and Treasurer, St. Catharines, Ont.

Optical Society of Western New York (1903)

J. P. SIMCOX, President.
ERNEST V. SYRCHER, Secretary, 11 Genesee St., Buffalo, N. Y.

Seattle Optical Society (1903)

CHARLES G. HOLCOMB, President.
LEANDER BUTT, Secretary and Treasurer, 715 First Ave., Seattle, Wash.

Los Angeles Association of Opticians (1903)

FRED. DETMERS, President.
F. LEE FULLER, Secretary, Los Angeles, Cal.

The Pueblo Optical Association (1903)

OREN H. HENRY, President, Pueblo, Colo.
JAMES A. HOWARD, Secretary, Pueblo, Colo.

Lowell Optical Society (1903)

F. C. CUFF, President.
J. A. MCAVOY, Secretary, Lowell, Mass.
Meets second Thursday of March, September, November.

Southern Tier Optical Society of New York (1905)

F. E. ROBBINS, President, Elmira, N. Y.
F. A. JORDAN, Secretary, Elmira, N. Y.

Optical Trades Association (1905)
(New York City)

F. D. SCHMIDT, President, New York City.
JOS. FRIEDLANDER, Secretary, 8 Maiden Lane, New York City.

Detroit Optometry Club (1905)

A. W. KLUDT, President.
FRED. R. PRESTON, Secretary, 42 Mott Ave., Detroit.

Southern California Optical Society (1905)

A. L. APPEL, President.
G. A. PICON, Secretary, 342 S. Spring St., Los Angeles, Cal.

Prosecuting Unlicensed Opticians

THE optical societies in those States which are favored with laws regulating the practice of optometry are lately manifesting much greater activity in the enforcement of the registration and licensing provisions. This is as it should be, for if the optometry measures already passed are allowed to become a dead letter the fact will militate strongly against the securing of similar legislation in other States. The Los Angeles, Cal., *Daily Times* reports the result of a test case instituted in that city by the Southern California Optical Society to establish the validity of the optometry law. The defendant in the case was employed in a local department store as an optician, and was practicing refraction without conforming with the provisions of the law. The prosecution was successful, the judge fining the offending optician \$20, and ordering him to take the examination of the California State Board.

The winning of this case, we are told, caused elation among the members of the society, who will now conduct an active campaign to oust the great number of itinerant fake opticians located in Los Angeles.

In Minnesota and Oregon, also, there's trouble brewing, we understand, for those who are ignoring or evading the optometry law now in force in these States. In the report printed elsewhere of the semi-annual meeting of the Minnesota Optical Society several cases of successful prosecution are announced, and a continuation of the campaign is threatened.

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Vol. 1

MARCH, 1906

No. 1

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Optical Notes

✿ The North Dakota State Board of Examiners in Optometry will give their next examination at Antlers Hotel, Grand Forks, N. Dak., commencing Tuesday, April 10th.

✿ A joint convention of the Kansas and Missouri optical societies will be held in Kansas City, Mo., on May 8th and 9th. The jewelers will meet at the same time and place to form an organization.

✿ The Ohio Optical Association will hold its annual meeting in Columbus, Ohio, some time in May. The exact date has not been set, but will be announced later. This association has issued a new and attractive membership certificate.

✿ H. M. Barg, hitherto of the Barg Optical Co., manufacturing opticians, 30 Arcade Building, Cincinnati, Ohio, and B. Schulte have become associated and will conduct that business at the same location under the firm-name of Barg & Schulte.

✿ The Bay State Optical Co., Attleboro, Mass., has issued a handsome eighty-page catalogue showing excellent illustrations of its extensive line of gold and gold filled optical goods. These include spectacle frames and mountings, eyeglass frames and mountings, eyeglass chains, pin chains and pins, hooks and eyeglass handles, springs, guards, bridges, temples, etc.

✿ L. L. Stone, the jeweler-optician, of Canton, Pa., has patented an eyeglass improvement which he has named the "Stone Shoor-lock." This device obviates the need of the screw which customarily holds the spring and guards. It is so simple that no tools are needed to put it together or take it apart, and the inventor claims that when locked it is so secure that it cannot work loose.

✿ Charles Fried, who has been connected with the R. Hoehn Co., of New York City, for a great many years, has recently taken over the artificial eye department of the business and will conduct this branch under his own name at 100 East One Hundred and Twenty-third Street. The R. Hoehn Co. will confine itself hereafter to the manufacture and sale of the thermometer line, and give up their quarters at 83 Chambers Street, and will probably have office space with Mr. Fried.

✿ E. Kirstein Sons Company, of Rochester, N. Y., whose spectacle and eyeglass case factory was destroyed by fire on the morning of March 19th, were running practically full force within a few days of the occurrence. The temporary dislocation caused little or no delay in the execution of orders, thanks to the excellent organization of the business. The optical department was considerably damaged by water, but within forty-eight hours prescriptions and optical orders were being filled with customary care and promptness.

✿ The policy of putting retail selling prices on their goods is being adopted by many manufacturers. This policy has some strong points in its favor; it protects the trade from the expensive annoyance of price-cutting, and enables them to sell the manufactured articles on their merits. Where a line is first-class in every way and carries a guarantee, it proves a safe and strong business policy. The Globe Optical Company, of Boston, have adopted this policy in putting on the market their new line of bird glasses, field glasses, etc. Their line comprises two grades called the "Globe Special" and the "Globe Superior," with four styles in each grade. They also have a "Globe" prism binocular.

✿ M. E. Stern, wholesale optician, is moving across the street into the new Cockcroft Building, on the corner of Nassau and John Streets, New York City. Mr. Stern will occupy two large rooms on the second floor, at the western end of the building. The two rooms contain about one thousand square feet of floor space and will give him considerable more space than he had in his old quarters, which were quite inadequate for his growing business. One of the rooms will be fitted up as an office and salesroom, while the other will be given over to the workshop. A number of new grinders and optical machinery will be installed in the latter, each grinder or piece of machinery having its own individual motor to operate it.

✿ Many of our readers will recognize in the accompanying portrait the familiar features of the veteran traveling man, George A. Douglas, one of the oldest and most popular men on the road.



George A. Douglas

Mr. Douglas makes his home in Toledo, Ohio, but travels for the Johnston Optical Co., of Detroit, Mich. His connection with the company began January 1, 1894, and his employers take pride in crediting him with the unique record that in all that time he has scarcely lost a day or estranged a customer. He is always able to report "good trade," his own popularity and that of the firm he represents making his way smooth and successful. He is a shining example of the satisfied employee. His own forceful way of expressing it is that he will travel for the Johnston Optical Co. until he is ninety-nine years old and then take a rest. Cheerful and healthy, he looks indeed as if he might achieve this record. He is a veteran warrior as well as traveling man, as he was an officer in the civil war and wears a Loyal Legion and Gideon button. He says they represent respectively loyalty to his country and the Great Commander.

American Association Notes

First Vice-President Briggs S. Palmer, of the New England Association of Opticians, is desirous of making up a party to attend the Rochester Convention in August, and hopes to have a contingent from the vicinity of Boston large enough to make up one or two special cars. He requests that all New Englanders who propose to attend the convention communicate with him so that he may be able to arrange with the railroad company for special rates and cars for the party.

Secretary Huston is arranging for special cars to convey the opticians from Missouri, Kansas, Nebraska and Iowa to the Rochester convention in August. The plan is to hold a joint meeting at Kansas City of the opticians and jewelers from these four States, who will attend the convention, and go on from there in special cars. A goodly number is expected to join in the trip, as made in this way it will be much more enjoyable than if the party traveled separately.

To Opticians Everywhere:—In view of the fact that several State societies, who have already held their annual meetings, have needlessly ap-

pointed delegates to the National Exhibit and Convention to be held in Rochester, August 6th, 7th, 8th, 9th, I beg to state that the American Association of Opticians is no longer a delegated body.

A big, broad, open-hearted invitation is extended to every reputable optician in the United States and Canada, to be with us in Rochester, where you will see the biggest bunch ever congregated at any meeting.

Very truly yours,

WM. E. HUSTON, Secretary.

South Dakota Society

THE KEYSTONE received an inquiry recently if this association was still in existence, and if so why no meetings had been held for a considerable time back. In response to an inquiry sent to President Fritz, he writes us as follows: "The South Dakota Optical Association is very much alive at the present time, and we are making arrangements to call a meeting just as soon as we can arrange a suitable programme. I am in correspondence with the secretary regarding the arrangements for the meeting and plans to arouse interest and a good attendance." Mr. Fritz also writes that they contemplate having a number of difficult cases to refract at the convention and assigning these to different members to work out corrections, and that he expects S. B. Millard, of Minneapolis, to address the next meeting. He also states that the officers of the association have spent considerable time and money in keeping the organization intact, and tried to have a bill passed at the last meeting of the legislature, which received but very little support from the membership in general. It is to be hoped that when the meeting is arranged for and the date announced, that it will meet with a hearty response and be largely attended, and the good work in South Dakota continued.

A New Optical House Organ

The Merry Idea is the name of a new publication which has made its bow to the jewelry and optical trades of Kansas City and surrounding towns. Vol. I, number 1, has just made its appearance, and each month the new tabloid journal is to be sent out. It is published primarily in the interests of the Merry Optical Company, of Kansas City and Memphis, and while it contains plentiful boosts of the Merry enterprises, it is also marked by news and items of general interest. The cover makes the following announcement:

We have long felt the need of a monthly thought vehicle, a means of keeping in close touch one with the other—a place where we might sit for a heart to heart talk, a quiet nook wherein to tell of mutual needs, of things in general and things not so general. So we make our bow, "Merry people and those who should be"—that's wide and broad, an invitation that covers the Middleland from Canada's snow-clad borders on the North to the verdant shores of the Gulf, extends well into the East and across the Rockies to the West, nor yet confined to the domain of Uncle Sam. That's Merryland with trails blazed in "The Merry Way." All are welcome to the pages of *The Merry Idea*. This little paper will come your way regularly once a month, twelve times a year, providing you signify a desire to see us again. Otherwise we shall come but semi-occasionally, possibly not at all. A rapacious waste basket ever yawning for the omnipresent postal card, compels us to ask that your request come in letter form on your own stationery, addressed to Dept. E, Merry Optical Company, Kansas City, U. S. A.

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This is truly an age of results rather than intentions; yet the former cannot be great without the inspiration of the latter.

This **Prescription Department** was planned upon the highest principles.

The intention has proven the inspiration of a **Prescription Department** head and shoulders above any other in the South.

It has placed our customers in closest touch with everything new in the optical world.

It has helped each to serve his customers well and provided an optical stock, as well, practically limitless.

Nothing has been unimportant. Nothing is left undone that will make you feel safe in trusting your customers' prescriptions to us.

We are the Pioneer Surface Grinders of the South.

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Stiffest, Most Flexible
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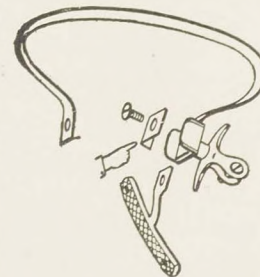
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Positively prevents the screw
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Have you or your customers
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The lock nut will prevent all
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The Minnesota State Board of Examiners in Optometry

At the meeting of the Minnesota State Board of Examiners, held at the old State capitol, St. Paul, March 1st and 2d, twenty-five candidates presented themselves for examination, twelve of whom were successful, the highest reaching eighty-five per cent. Those successful were I. W. Langaard, St. Paul; Thos. P. Culshaw, Minneota; F. H. Towne, A. O. Norstrom, A. W. Sheehan, Dora Bell, Mrs. B. O. Hulberg and Geo. T. Williams, Minneapolis; P. D. Coyne, Graceville; E. H. Prey, Canby; S. Olson, Kensington, and R. H. McEwen, Stewart. The percentage of those failing to pass ran from seventy and one-eighth to thirty and seven-eighths.

The examination consisted of fifty questions, to which written answers were required, a subjective examination with the trial case and cards, together with four compound lenses to be neutralized. This was the largest class ever examined, and while there were a majority of failures, it simply shows the value of the law to the public in general. In fact the older the law gets the less opposition there seems to be to it. It certainly has raised the standard of the practicing optometrist, and favors no one except the public whom it protects. Minnesota is proud of its work and wonders why its neighbor States are not anxious to have the same protection. If the general public only realized its value, they would rise en masse and demand the immediate passage of a law similar to ours.

The secretary reported the arrest and convictions mentioned in the report of the Minnesota State Association.

North Dakota State Optical Association

The third annual meeting of the North Dakota State Optical Association was held at the Waldorf Hotel, Fargo, on January 20th, with a fair attendance.

J. F. Brown, Enderlin, N. Dak., was elected a member of the association.

The committee report on framing amendments to the State optometry law was accepted, and the committee discharged.

The following officers were elected for the ensuing year: President, A. O. Wold, Langdon; first vice-president, M. Varnson, Valley City; second vice-president, J. M. Ness, Wahpeton; secretary, W. R. Blakely, Grafton; treasurer, A. G. Tellner, Jamestown. J. F. Brown, Enderlin, was elected a member of the board of directors to succeed A. W. Blakely, Minto, term expired.

On motion the board of directors were instructed to assign each member a subject on which to prepare a paper for the next meeting.

Motion made and carried that a letter of condolence be sent to Vice-President Varnson, of Valley City, on the loss of his wife.

President Conyne delivered his annual address, which was followed by an able paper by President-elect Wold on optical questions and answers, and this in turn was followed by A. G. Tellner, Jamestown, with an excellent paper on "Presbyopia," both of which were interesting and instructive, the more so because of the able discussion which they drew from members present, showing how many questions can be asked and information furnished by intelligent discussion.

An hour's clinical demonstration followed, which brought out some of the usual questions for

discussion. This was followed by adjournment, subject to call of board of directors.

Anton O. Wold, the president of the society, is a jeweler and optician, of Langdon. He was born in 1870, and was past his majority when he entered the jewelry trade.



President Anton O. Wold

Realizing the importance of optics, he took a course at W. F. A. Woodcock's Watch-making School, Winona, Minn. At the close of this course of study, he started in business at Alma Center, Wis., where he continued for one year. In the spring of 1895 he went to work for

his cousin, M. T. Wold, at Grand Forks, N. Dak., and the same year in the fall he went to Langdon, N. Dak., and associated himself with a druggist in the jewelry and optical business. As the optical business developed, he saw the necessity of a higher education, and took an additional course at both the Chicago Optical College and the Northern Illinois College of Ophthalmology. The summer of 1900 he was commended by an oculist as having the best-fitted optical parlor in the State. When the announcement was made to the opticians of North Dakota to meet at Fargo, February 11, 1903, to organize an optical association, and see that they secured the wanted optical legislation, he was there to aid, and was elected second vice-president. When the board of examiners was founded the same year by Governor White, he was honored by being appointed a member, and made president. Being desirous of obtaining all information possible that might aid in the advancement and upbuilding of the optical profession, he was one of the first to enroll with the Northwestern and American Association of Opticians.

Rhode Island Society of Optometry

The regular monthly meeting of the Rhode Island Society of Optometry was held Monday, March 12th, at 8 P.M. President W. J. Davis in the chair.

The regular routine business was transacted, and the following subject discussed:

Resolved, Should the opticians seek legislation to regulate the practice of optometry?

The affirmative side was presented by Herbert Blake, of Providence, and H. Fellman, of Woonsocket. The negative side was presented by A. McDonald and Mr. Blair, both of Providence.

Both sides were very well presented, and had the award been made strictly upon the merits and the arguments as presented, it would have been hard to decide, but sentiment crept in and the affirmative side carried off the honors. Mr. Fellman, of the affirmative, and Mr. McDonald, of the negative, are to be especially commended for their efforts. After the debaters had presented their arguments, the question was thrown open to the members, and it could very easily be seen that no arguments could possibly have been presented by the negative to have given them the victory.

Just before the meeting closed, President Davis named the following to prepare for a debate at the next meeting: Affirmative: Fred. S. Neff, H. D.

Murray, Andrew J. Morrison; negative: G. Fred-eric Beane, Herbert W. Cunningham, and F. J. Laundry. The subject will be:

Resolved, Should each eye always be given its full correction?

Great interest is being shown among the members in these debates, and a very successful year is assured.

New York City Optical Society

The regular meeting of the Optical Society of the City of New York was held on March 14th, in the optical parlors of A. Martin, 17 West Twenty-eighth Street. The following applications for membership were handed in: Samuel Ross, 6 Third Avenue, Brooklyn; Stephen R. Brooks, Tottenville, S. I.; David S. Michel, 18 East Fourteenth Street, New York City. These names were laid on the table for action at the next meeting. The following named gentlemen, whose applications for membership were handed in at the last meeting, were elected: Samuel Hurwitz, 830 Broadway, Brooklyn, and J. C. Watson, 428 Columbus Avenue; J. Gordon, Grand and Chrystie Streets; Elmer E. Hotaling, 108 West 138th Street, and A. R. Reed, 17 West Twenty-eighth Street, New York City.

Mr. Marchant, as chairman of the educational committee, stated that that committee had held two protracted meetings and thoroughly discussed the matter under consideration. The chief features of the report are as follows:

Dioptrician Grade.—This grade shall be composed of those who are able to pass the examination in mechanical optics and the principles of catoptrics and dioptrics.

Optometrical Section.—This shall be called the optometrical section of the Optical Society of the City of New York.

Qualifications for membership in this section shall be, as shown by an oral and written examination, in the following subjects:

a. A knowledge of general anatomy, as far as it relates to ocular reflexes and a specific knowledge of ocular anatomy, physiology and pathology.

b. Objective and subjective methods of ocular examination and prescribing of lenses for correction of cases that may be presented.

Members of this section who are principals, shall charge a fee for examination in all cases, except in those of well-deserved charity.

Members of this section shall be known as eyesight specialists.

A certificate as eyesight specialist, signed by the officers and examining board of this society, will be issued to such members of the society who pass the required examination for this section.

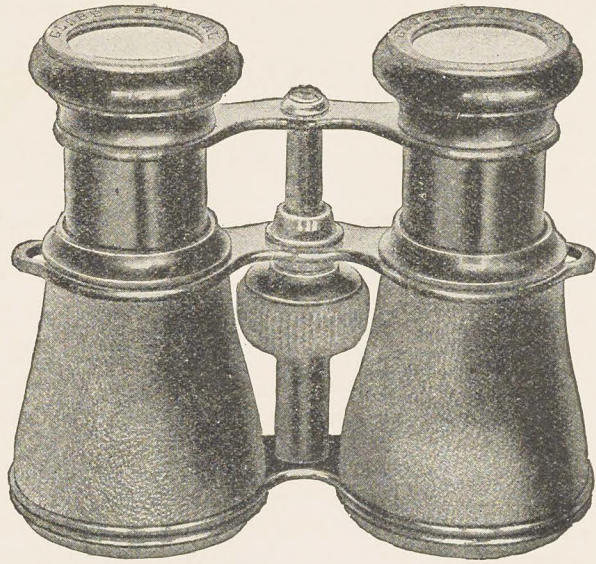
The first examination for both the above grades will be held on the Wednesday following the regular meeting, in September, 1906.

All members, upon passing the examination for membership in this section, shall pay a fee of \$10 for the certificate.

It explained that the \$10 fee would be turned into the treasury and used for the printing of the certificates and for other matters pertaining to the educational department.

A discussion arose as to the use of the title "eyesight specialist," Mr. Fisher believing that the title should be "optometrist." Messrs. Marchant, Lockwood and Frankel advocated the title "eyesight specialist," claiming that the title would be less misleading, and clearer than the other to the general public.

The president named the following as a committee to prepare papers and to hold the September examination: E. Le Roy Ryer, chairman; P. A. Dilworth and F. A. Marchant.



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WE ANNOUNCE
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Suitable for all uses and purses

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OUR SUPERIOR LINE

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No. 44.	Marine Glass	(26 ligne)	retails 18.00

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And pushing them will give you MANY SATISFIED CUSTOMERS

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of illustrated booklet, which we will supply you quantity of with your imprint.

Ask our traveling men to show you their line

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We are centrally located between New York and Chicago, with railroads running in every direction from our city. We can furnish you Prescription Work quickly and accurately. Reliable in every respect. Send for Catalogue and Prescription Book.

The White-Haines Optical Co.

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ARTIFICIAL HUMAN EYES

We are the only manufacturers in this country who can produce perfectly

THE FULL BACK REFORM EYES

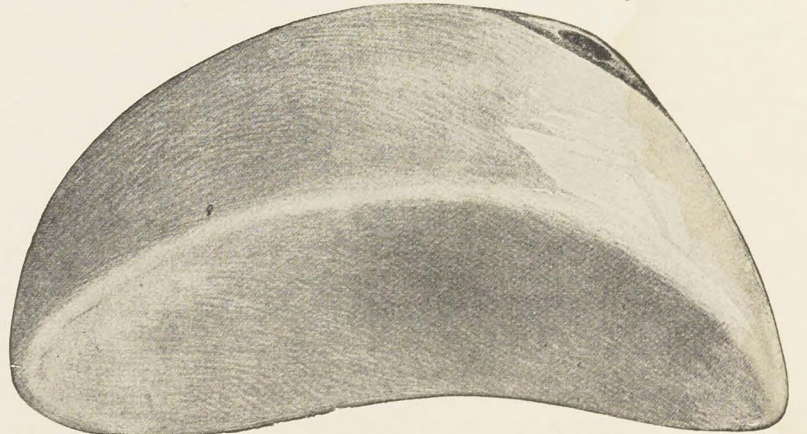
Sometimes Called the Dr. Snellen Eye

- 1st—The Full Back catches the muscles and gives a surprising increase of motion, producing lifelike expression.
2d—Give comfort because there are no irritating edges.
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Life size illustration
of one shape of FULL
BACKREFORMEYE
—No irritating edges



Life-size illustration
of old Shell Eye.
Irritating edges.



Enlarged illustration of Full Back Reform Eye, showing clearly the full back, which forms an easy cushion and obviates irritating edges. This FULL BACK is made in various curvatures. Opticians are invited to visit our works and see how we make eyes, matching and filling special orders with the utmost facility and accuracy. We also have constantly on hand the largest stock of regular shell eyes. We can make to order (on the premises) the most difficult eye within a few days. Write for our special circular "Facts About Artificial Eyes and How to Order Them."

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Write for our Booklet "K"

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New York State Optometry Bill

Public Hearing Before the Committee on Public Health—Arguments for and Against the Measure

The public hearing on the optometry bill before the committee on public health was held at Albany on March 13th. The opposition to the measure was unusually weak, the medical profession having a solitary representative in the person of Dr. Root, chairman of the legislative committee of the Medical Society of the State of New York. E. B. Meyrowitz and Mr. Mundorf, dispensing opticians of New York City, and Mr. Mayer, of Buffalo, also appeared in opposition.

Dr. Root opened the talkfest in opposition to the bill, stating that the State Medical Society was opposed to any legislation "which would legalize efforts to break into the medical profession," arguing that eye refraction was a branch of medical practice. How the doctor was discomfited by the pointed queries of the committee is revealed in the following conversation:

Committee. Do you think it is better to let them carry on an indiscriminate and unqualified practice than to make them qualify to a certain standard?

Dr. Root. That leads us to an entirely different side of the question. If I could feel sure that my answer would not be twisted I would say no.

Committee. We should prevent any legal recognition and let things go on as they are, or recognize them and make them come up to a certain standard?

Dr. Root. I think this is not germane to the main question.

Committee. Was not the dentistry law in the interest of the public?

Dr. Root. I think the dentistry law was in the interest of the public.

Committee. Does it not follow that this law would be in the interest of the public?

Dr. Root. I think not sir.

Committee. Do you not think there is great harm being done to the public through incompetence of the opticians?

Dr. Root. I think great harm comes to the public.

Committee. Then it is well to have some standard?

Dr. Root. I think it is well. We would be in favor of the same standard for all those who practiced the same line.

Committee. You would make everybody come up to the same standard? Do you think that druggists should be educated as physicians to practice their business?

Dr. Root. I think that to be generally efficient it would be to their interest to study medicine. I take it that the druggists follow out the directions of the physicians.

Committee. You said encroachment of the medical profession. If it is an encroachment then it would help to take away from the medical profession some branch they practice?

Dr. Root. I do not admit your premise if it is taking from the physician part of his already-recognized prerogatives. We as physicians have no quarrel with these men. We are not fighting for something they are taking away from us.

E. B. Meyrowitz, who followed Dr. Root, said he represented the Opticians' League of the State of New York, an organization of dispensing opticians. The opposition of Messrs. Meyrowitz, Mundorf and Mayer was greatly weakened by admissions. Mr. Meyrowitz said: "I do not say that this movement on the part of our brethren is not a step in the right direction and hope they will continue to move forward. I think they are moving in the right direction, but they are trying to get at it too quickly. They should improve themselves further."

And Mr. Mayer thoughtlessly nullified the entire argument of the opposition by the blunt

statement: "If this bill is passed we will not be able to stay in business."

The parallel case of the dentists was used to excellent purpose by the friends of the measure on the committee, who seemed exceedingly well posted. When Mr. Mundorf asserted that anybody could go to a fake optical school and get a certificate, he was promptly asked whether he favored a continuance of this, and an unwilling negative was forced from him. In fact every argument supposed to be against the measure was twisted in favor of it by pointed questioning.

E. E. Arrington, of Rochester, opened the arguments in defence of the measure and found his task a light and agreeable one. He said in part: "I made the statement here last year that three States had passed this bill and that others would fall in line until every State in the Union had passed it. This year there are five States that have this law and the bill is in the legislature of nine more."

Mr. Arrington then called attention to the inconsistency of E. B. Meyrowitz in opposing the bill in New York State, when in Minnesota, where the law has been in force five years, Mr. Meyrowitz has two stores. Mr. Arrington read a letter from the secretary of the State board of examiners showing that Mr. Meyrowitz has employed in his two establishments men who have passed the examinations and complied with the law, and asked, "Is it not ridiculous that Mr. Meyrowitz should oppose in New York what he practices in Minnesota?"

The code of ethics adopted by the State optical society was used to good purpose in the argument.

A. Martin, the well-known optician, of Philadelphia and New York, was next introduced, and made the usual forceful argument in favor of the law. In regard to the assertion of Mr. Meyrowitz, that scientific examination of the eyes called for the use of drugs, Mr. Martin said: "Mr. Meyrowitz is the manufacturer of an instrument called the ophthalmometer, which is so accurate, so exact, that it will show the slightest degree of astigmatism without the use of drugs. In our four stores we use this instrument. And yet he claims we are not competent to do this work, and comes here to oppose this bill."

Taking the cue from an assertion of Mr. Martin, the committee asked Dr. Root if thirty-two hours was all the time devoted to the study of the eye in the medical colleges. Dr. Root replied the thirty-two hours was all that was devoted to lectures, but that more time was given to study.

Mr. Martin replied, "Dr. Root is a throat specialist and he has admitted here that he knows very little about the eye."

A. Jay Cross summed up for the measure in a forceful address with the opening announcement: "I have been coming here for the last nine years and if necessary I will come nine years more in the interest of this bill." His entire argument was logical and convincing.

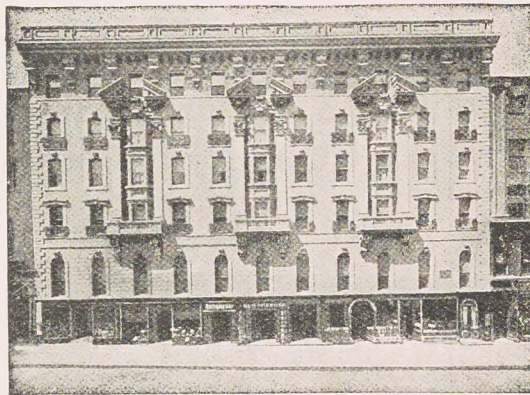
The committee seemed to give great weight to the lack of oculists and the need of optometrists in country districts. In response to Dr. Root's contention, that there were "plenty of places where the poor people could go and get treatment free," Committeeman West said: "Where I reside it is seventy-five miles to Rochester and eighty miles to Syracuse. It would require time and railroad fare. There is a large field which must be filled by these optometrists. The people could be fitted by the visiting optometrists."

Since the above report reached us we are informed that despite the prospects for the bill being reported out favorably, it will hardly be reported out at this session.

New England Convention

Preparations are going on apace for the big convention to be held by the New England Association of Opticians at the New American House, Boston, on May 15th and 16th. Space in the Exhibit Hall has nearly all been spoken for, and manufacturers are arranging for very interesting exhibits, and also planning some very handsome souvenirs to distribute.

There will also be a number of very interesting papers discussed at the meetings. Perhaps the most important of these is the question as to whether the time is now ripe for establishing a recognized college of optometry, and if so, where should such a college be located? Several of the leaders of the educational movement in the East have been secured to discuss this important topic. Among the other papers will be an address by Briggs S. Palmer on "Systematizing an Optical Business," a paper on "Scientific Salesmanship,"



New American House, where New England Association Convention and Exhibit will be held May 15th and 16th.

by Prof. Conger, of the Sheldon Commercial School, and a description of the new Health Ray Lenses by Dr. Campbell, of Topeka, Kans.

Free Banquet and Theater Party

Among the special features of the convention will be the entertainment of all the members and visitors by the two local optical firms, the Globe and Boston Optical Companies, and also the entertainment by Stevens & Co., the well-known optical manufacturers, of the visitors at a theater party.

A number of new and interesting optical instruments and machines will be exhibited, and altogether the entertainments point to the largest and most interesting convention ever held by this association.

The April meeting of the association will be what is known as the Annual Ladies' Night, and will be held at the Hotel Bellevue, 23 Beacon Street, on the evening of April 17th, at 6 o'clock. Entertainment will be furnished by a band of Mexican serenaders in costume, performing on the mandolin, guitar, violin, banjo and xylophone. These serenaders will be assisted by Miss Mona Belle Welch, reader. The entertainment will be given during and after the dinner.

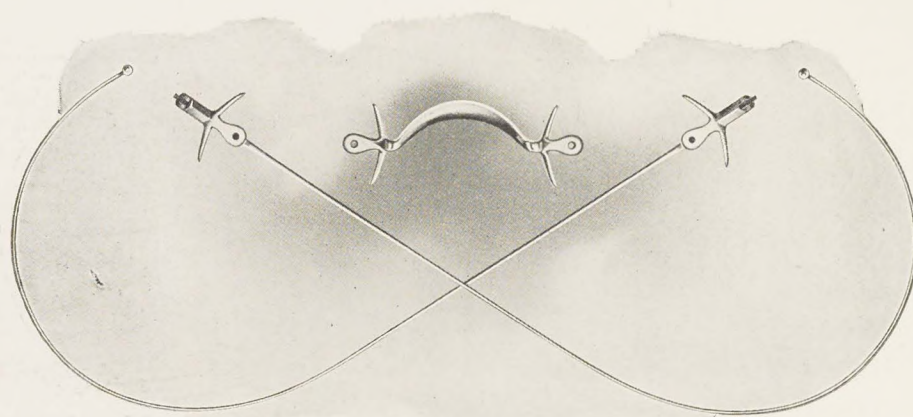
The March meeting of this association was held at the regular time, at Young's Hotel, on the evening of March 20th. George B. Nagel, of Boston, and Ernest C. Robes, of Medford, Mass., were elected to associate membership. Dr. Frederick C. Cobb, of Boston, delivered a very interesting address on "Diseases of the Nose and their Relation to those of the Eye."

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Contains all the best features of the **S-Q** Frame.

Has 1-5 bridge and temples, 1-10 straps and end-pieces and is 12 karat stock.

There is also a really wonderful feature in connection with the strap to prevent loosening of the lenses. They remain tight even after misuse and much bending—an improvement which will appeal both to the trade and to the consumer.

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Minnesota State Association of Optometrists

The tenth semi-annual meeting of the Minnesota State Association of Optometrists was held at Builders' Exchange Hall, St. Paul, Minn., February 27th and 28th, and proved a record-breaker for attendance, as the list below will evidence. It was not only a well-attended meeting, but for quality of attendance was the best one ever held in the history of the association. The meeting was opened by President Brown, who, in a vigorous address, exhorted the members to keep the association where it now is, in the front rank of optical organizations.

S. B. Millard then gave clinical demonstrations of two difficult cases. Several of the members present took issue with Mr. Millard, which resulted in an animated discussion. Good feeling was manifested throughout the entire meeting, and it was interesting to note how different opinions, properly expressed, enhance the value of discussions.

Next on the programme was a paper prepared by J. L. Egleston, Wadena, Minn., on "The Subjective Method of Examination," which was read by Secretary Snell, Mr. Egleston being unable to attend. His argument was in favor of the almost exclusive use of the subjective method of examination, which side of the case was ably presented and proved deep study of his subject. Debate was necessarily dispensed with out of courtesy to the author. This was regretted, as the subject was a valuable one for discussion. A vote of thanks was tendered Mr. Egleston for his paper.

Mr. Hitchcock, of the membership committee, reported progress and asked further instructions from the association. He also reported the applications of O. A. Holmes, Minneapolis; Mary Norberg, Anoka, and J. M. Ness, Breckenridge, with a favorable report, which was accepted and their names were added to the membership roll. Adjournment was then taken.

Next day the meeting was opened by C. A. Snell with a blackboard demonstration illustrating the methods and principles involved in finding the "nodal points." This was very interesting and was followed by a clinic by I. M. Radabaugh, Hastings, Minn., demonstrating the method of diagnosing errors of refraction by means of the fogging system, which had the close attention of every member present. Mr. Radabaugh has the happy faculty of an easy conversational style and flow of words which assisted greatly his practical exposition of his subject, in which his patient seemed not at all averse to "butting in" with a humorous word himself from time to time, all of which was taken advantage of by the audience taking the cue and at opportune moments making comments and asking questions, making the hour and a half spent in the clinic very interesting. Question slips were quietly passed around during the examination, but owing to press of other business they were held over to next meeting.

The report of the library committee was then presented by Mr. Hartmann, and on motion was accepted and the committee discharged. The report consisted of a recommendation for the establishment of a library and rules governing same, which provided for a committee of three to have complete charge of the matter, they to appoint a librarian. The committee is composed of F. H. Straub, Fergus Falls, chairman; M. Morrison, Minneapolis, and J. M. Chalmers, Lake City. The committee reported as a nucleus for the library twenty-seven volumes donated by friends and

members, which was received with generous approval. After the meeting the library committee elected C. A. Snell librarian.

The minimum price-list committee reported a printed list which had been acted on by them and a committee from the Northwestern Optical Association and the optometrists of the Twin Cities, which was adopted by the association, and the secretary was instructed to have a new lot printed and distributed as soon as favorable action had been taken by the Northwestern Association at their March meeting.

During the meeting Secretary Snell was called to the telephone to hear a report of the trial of "Dr." H. H. Koller, at Winnebago City, which had that day been carried through successfully, a fine of \$20 and costs being imposed. This news was received with pleasure, as this party had openly defied the State board.

Secretary Snell also informed the members that there were three other arrests made under the law, but the cases had not come up for trial, but would in a short time. Since the meeting the case against "Dr." Benj. Boasber, Minneapolis, has been carried successfully, he also being assessed \$20 and costs. The other two cases mentioned were at St. Cloud, Minn., where Fritz Guy and John Weber were arrested for violation of the State law. The former could have secured registration at the time the law was enacted in 1901, and was advised and warned by the secretary to do so, but now states that he did not suppose the law would ever become effective so did not take advantage of it. The latter failed to pass an examination and openly stated he would not take it again but practice anyway.

A. J. Klimek, Little Falls, the subject of the clinic held at the American Association meeting last summer, who could hardly speak at that time, gave a very interesting sketch of the results of his treatment. His ten-minutes' talk was convincing evidence of the result, and he pronounced himself thoroughly satisfied and testified voluntarily as to the benefits received. His closing statement was: "To those of you present at that time who hear me now I need say no more, you see and hear the result."

The meeting has shown that with "Progress" for a motto, the growth of the association has been steady. Interest has been on the increase and the meetings are made more and more interesting as the members lose that jealous feeling and become more intimately acquainted with one another. The fear that one will say something that will be misunderstood has disappeared, and to one who has attended almost every meeting it certainly shows the value of co-operation.

A number of the best members of the association failed to appear this time, and the majority were thoughtful enough to write and make an excuse which was sufficient to satisfy all. Brother Nerbovig, Mankato, wrote: "Am sorry I can't be with you. I will not be in the State at the time, but I will be with you in thought just the same." Brother Chalmers, Lake City, was just "installing new fixtures and could not leave the store, as it was all torn up," and others had like good excuses.

Again was the association honored by the fair sex, and there should be more. There are quite a few ladies on the membership roll, and it is always a pleasure to see them at the meetings.

The next meeting will be in June or July at the selection of the board of directors, and this will be a gala occasion. Arrangements already started will make it instructive as well as entertaining. Efforts will be made to make it even pleasanter than

last summer's meeting, which all recall as a gem. Watch for the announcement in these columns.

There were about ninety in attendance, and we regret we failed to get all the names, but those we succeeded in locating were as follows:

Miss Dora Bell, Minneapolis.	H. T. Halverson, Alexandria.
Miss Zimmerman, St. Paul.	C. A. Snell, Minneapolis.
W. C. Krueger, North Branch.	E. S. Bugbee, Minneapolis.
J. D. Schroeder, St. Paul.	A. J. Klimek, Little Falls.
H. M. Hitchcock, Redwood Falls.	E. E. Ostrom, Minneapolis.
S. B. Millard, Minneapolis.	J. H. Mosher, Akeley.
Prof. J. W. Grainger, Rochester.	I. Reiner, Hutchinson.
Hubert P. Marx, Shakopee.	J. C. Herdlika, Princeton.
M. Morrison, Minneapolis.	Frank A. Ubel, St. Paul.
F. J. Pratt, St. Paul.	J. H. Zimmerman, St. Paul.
A. Swenningsen, Moorhead.	Arthur Williams, St. Paul.
F. H. Straub, Fergus Falls.	G. T. Williams, Minneapolis.
Geo. H. Lang, Mankato.	J. D. Lifquist, Henning.
Wm. Plackner, Benson.	Henry B. Trotter, Wabasha.
Frank C. Wittenberg, Luverne.	R. H. McEwen, Stewart.
John C. Marx, Shakopee.	F. R. Peant, Montgomery.
C. A. Sherdahl, Montevideo.	A. A. Keene, Slayton.
Fred. H. Harm, St. Paul.	P. D. Coyne, Graceville.
W. G. Gould, Glencoe.	A. W. Sheehan, Minneapolis.
W. J. Hallin, Cambridge.	H. O. Loken, Houston.
John Rosendahl, Mapleton.	C. M. Krogh, Canby.
I. M. Radabaugh, Hastings.	F. H. Towne, Minneapolis.
E. M. Schwenke, New Richmond.	A. G. McCord, Minneapolis.
F. W. Harper, Renville.	L. M. Nelson, Fergus Falls.
H. O. Schleuder, Springfield.	Frank Hansen, Fergus Falls.
Frank Heitzman, St. Paul.	Geo. T. Hartmann, St. Paul.
	J. W. Brown, Ortonville.
	F. A. Upham, St. Paul.
	B. A. Benson, Glenwood.
	E. P. Long, St. Cloud.
	J. Schroeder, Iona.

In addition to the above Minnesota opticians were the following from other States:

G. R. Simons, Langford, S. Dak.	H. R. Jones, Bisbee, N. Dak.
W. J. Liffe, Dickinson, N. Dak.	B. E. Pierce, Sioux Falls, S. Dak.
F. W. Seaman, St. Croix Falls, Wis.	C. L. M. Bugbee, Newport, Vt.
	C. M. Jones, Bozeman, Mont.

Rochester Optical Society

The regular meeting of the Rochester Optical Society was held, March 13th, in the office of Clark & Bowen, Rochester, N. Y. The meeting was called to order by the president, H. M. Bestor, with ten members present. Several matters of importance were disposed of. The resignation of A. J. Sweezy was received and accepted. Messrs. Leo Wm. Kinder and Edwin H. Silver were admitted to membership.

The next lecture by Dr. R. R. Williams will be delivered at the society's next regular meeting, April 10th.

Missouri and Kansas Optical Associations

The Missouri and Kansas optical associations will meet in joint session in Kansas City, May 8th and 9th. An attractive programme is being outlined for the convention which will include some especially pleasant social features. The sessions of the convention will be held in the hall at 1114 Grand Avenue, and will be devoted to the hearing of papers and lectures, discussions upon optical subjects, and an election of officers. On the evening of May 9th, the wholesale jewelry and optical houses will tender a banquet to the visitors. Preparations are under way for the entertainment of three hundred guests, and the Kansas City opticians are especially anxious to have a full representation of both associations present. They feel that it is really important for the representative opticians of Kansas and Missouri cities to assemble in just such a way, and are using every endeavor to make the visitors heartily glad of coming. The Kansas City spirit, which manages to accomplish so many things, promises that the visiting opticians will not only have a pleasant and profitable convention, but they will be entertained in a most hospitable fashion. The entire programme for the convention of opticians has not been arranged, but plans have been advanced sufficiently to warrant some exceptionally interesting sessions.

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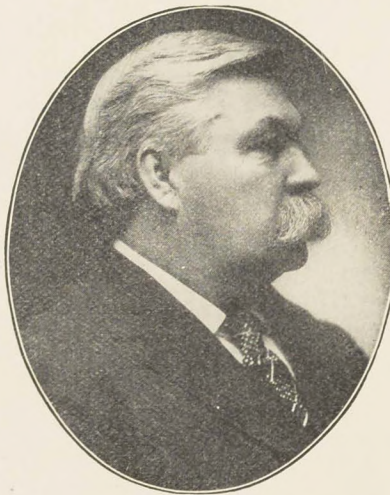
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The Manufacture of Ornamental Glass

NO other material has in recent years furnished such fruitful possibilities for mechanical and scientific ingenuity as glass, and the results are varied and beautiful, many of them being quite profitable as well as interesting to the trade.

A peculiarly high-grade branch of the glass ware industry is dealt with in the following illustrated article by E. F. Wolfrum in the *Business Man's Magazine and Bookkeeper*:

Glass manufacturing is one of the most important industries in the world, on account of the universal use of this necessary commodity in a thousand different forms.

In the Alleghanies there are certain odd-looking small factories nestled at the foot of tall cliffs. These cliffs are practically cliffs of glass, being composed almost entirely of quartz. There are numerous kinds of glass, such as bottle glass, window glass and art glass, but the basis is sand of a certain particular quality, the finest glass being made from the clearest and most pure quartz sand.

It has been suggested that the possibilities in glass manufacture develop-

ment of the manufacture of glass will be such that some day we will use glass rails on which to run glass cars. The telegraph poles will be made of glass, and the piles that hold up the glass rails will be made of glass. The ordinary steel structure is constructed to bear a certain strain for a certain time, but owing to the peculiar action of the molecular atoms that make the structure, it becomes in course of time so brittle that any unforeseen, unexpected or accidental occurrence suffices to disorganize the structure and break it. Glass never decays. After it has been properly burned it retains the same strength and quality forever. The scientists will explain to anyone the reason of the extreme durability and strength of a diamond. This is practically the same condition as applying to glass; it is simply a question of the quality of the glass.

Hereafter, coffins may be made of diamonds because diamonds will be so cheap. Until people can afford diamonds, however, they should use indestructible glass instead of rotting timber.

The Art Glass Industry

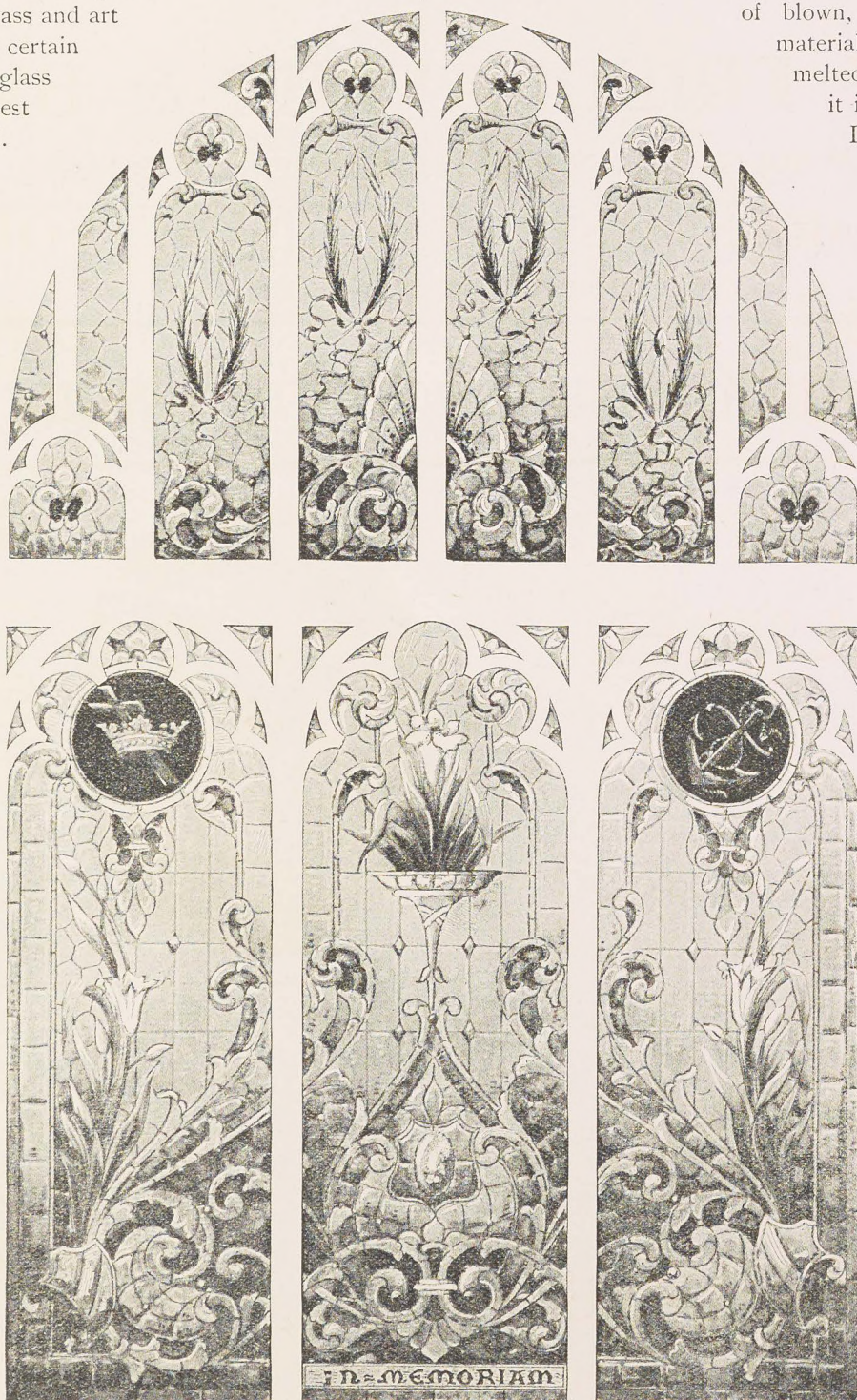
The art glass industry is one in which art is combined with mechanical skill. It requires first-class artistic ability to design and secure harmonious effects in coloring, while the mechanic forms the window from the numerous pieces of glass selected by the artist.

This industry is almost as old as man himself. Some of the grand cathedrals of Europe, built in the mediaeval days of Christianity, have stained glass which is still admired by our best artists.

The stained glass, being hand-painted, is fired in a kiln, similar to the treatment of china, while the modern art glass is a combination of colors, these colors being mixed in a pot, as the glass is melted.

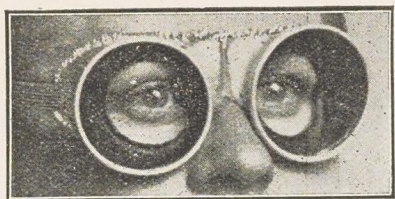
This particular kind of glass is rolled in place of blown, as window glass is. The material for window glass is first melted in large pots, after which it is gathered on the blow pipe. It is then taken in hand by the blower, who blows and swings the molten mass until it is a glass cylinder from ten inches to two feet in diameter, and from five to six feet long, after which it is cut apart and sent to the flattening room, where the cylinder is placed in a large oven-shaped furnace, and as soon as it is heated enough to make the glass flexible, it is flattened by a man using a water-soaked wood block, which is fastened on a long iron rod. This block is rubbed over the glass until it is perfectly flat and smooth, after which it is passed through the annealing oven. It then goes to the cutting room, where the various sizes are cut from the flattened cylinder of glass.

While colored glass requires the same material as window glass, it also requires the application of the colors to produce the required shade. After the ingredients are mixed they are turned into large earthen pots and heated with gas to a liquid form; a large ladlefull of the molten



Memorial Church Window of Stained Glass

(Continued on page 691)



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Barney Oldfield says

It is the most perfect Goggle I have
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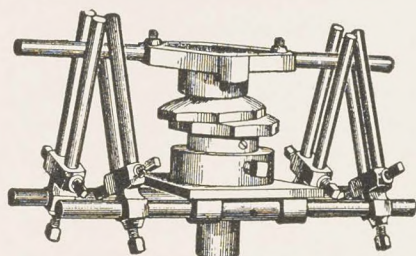
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The Manufacture of Ornamental Glass

(Continued from page 689)

material is then poured on an iron plate; it is then rolled to proper thickness with a heavy iron roller, producing a sheet of glass 32 by 96 inches. This sheet is placed in the annealing oven, which is a brick affair, 100 feet long by four feet wide and two feet high, in which is an endless carriage, called the "lehr." This annealing oven is heated from an extreme heat at the receiving end to the natural heat of the building at the other end where the glass is taken out. In passing through this oven the glass is properly annealed and, at the same time, the heat is so regulated that when the glass reaches the end of the oven it is cool enough to handle. The glass is then taken to the packing room where it is assorted into cases for shipment.

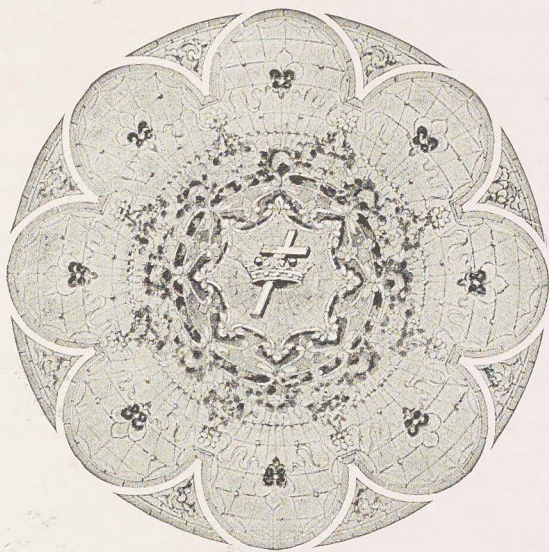
There are several grades of colored glass, cathedral glass being the most common and having but one color throughout the sheet, opalescent glass, being iridescent, or a mixture of two or more colors.

The manufacture of art glass is very interesting. The design selected is drawn on a sheet of paper the full size of the window; this is called the working-drawing. This design is then transferred from the working-drawing to a heavier sheet of paper, which is termed the "pattern." This pattern is then cut apart, by hand with a two-bladed knife or shears, which cuts out spaces one-sixteenth of an inch each. These spaces are cut out to allow the lead to be formed around the glass. Each separate piece of pattern paper is numbered to correspond with the number on the working-drawing. After the patterns are all cut apart they are placed on corresponding numbers of the working drawing.

Now comes the most difficult part, the selection of the proper colors to blend throughout the entire window, and this requires artistic taste and discrimination. Each pattern may call for a different color; or several patterns may call for the same general color, but a lighter or darker shade, as the case may be. The success of the window depends largely upon the correct shading to bring out whatever feature is designed.

After the color has been properly selected the paper pattern is laid on the glass and then cut by means of a diamond, allowing the diamond to follow to the outside edge of the pattern. After all the glass is cut it is taken in hand by the glazier; the lead being so shaped allows the glazier to bend the lead around the several pieces of glass. After the entire window is leaded together, each joint, where two or more leads intersect, is soldered together, making one piece, so to speak, of one thousand or more separate pieces of glass; the window is then cemented by using a mixture of lead, whiting and oil, which is spread over the entire surface, so as to fill the places between the lead and glass, thus making it watertight.

No church is complete without one or more figured windows. The most favored



subject is Christ depicted in one of his traditional characters, such as "The Good Shepherd."

How the Artist Proceeds

The artist must first make a crayon drawing of the figure of life size; this is called the cartoon and is in turn transferred, the patterns cut out, as in the art glass previously described.

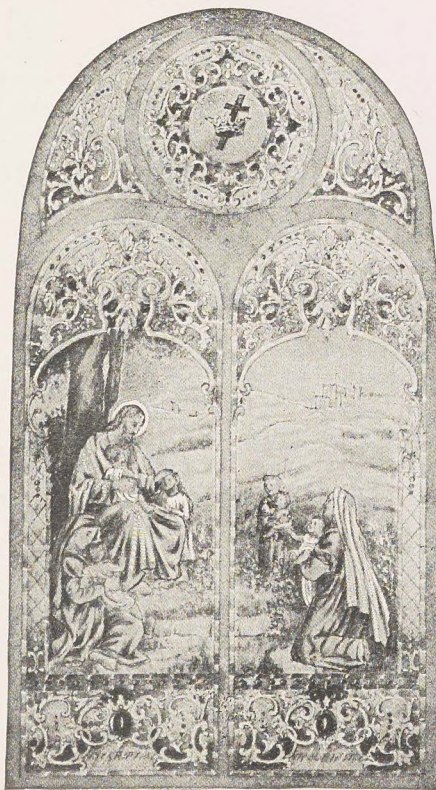
The glass, however, upon which the figure is painted is known as "antique glass," and is imported from England France and Germany, no antique glass being manufactured in this country. This glass is very uneven in thickness, some parts of it being as much as three-eighths of an inch thick, while other parts are as thin as a sheet of paper. It is purposely manufactured in this way so as to better represent the folds of the garments on the

figure. Some glass, red or blue, for instance, is flashed, *i. e.*, the red is spread over a sheet of white glass while hot, one side then being red and the other side white. A very rich effect is also produced by etching off a part of the red coating with hydrofluoric acid, making a lighter red where the acid is used for the raised parts of the fold, while the part not etched represents the depth of the fold. After the glass is selected and cut to pattern, it is painted over the surface with a black or brown mineral color and placed upon a glass easel which is placed in the window; all other light in the studio is darkened so as to have the light only on the easel; the high light is then brushed out, in order to obtain the proper shading, after which the glazier leads the several parts of the figure together.

American versus European Artists

It is generally supposed that the old artists of Europe paint the best figures, but the American artist is fast gaining on his brothers across the ocean, and we find many churches in this country that have windows designed and executed by domestic manufacturers which are equal, if not superior to the imported windows.

American artists in glass painting and glass staining took up the art where the mediaevalists stopped, in the study of the inherent properties of the glass, both in their color and texture, in order to obtain in the glass itself light and shade, through depth and irregularity of color, in union with inequality of surface. In this way they sought to avoid the dullness, opacity and thinness which invariably accompany the use of paint and are marked characteristics of European glass work. It was an American idea to make glass in lumps and chip it into flakes, to corrugate it, to blow it into shapes, or to pull molten glass out of shape. By such means the artist has succeeded in obtaining effects in this obstinate material which were deemed impossible. Tiffany introduced a few years since the use of opalescent glass, softening the hard lead lines by plating glass over glass and developing the mosaic system, substituting it for glass painting. Many churches, private houses, hotels and theaters are now decorated by the mosaic stained glass, and so popular has it become that in the year 1902 upwards of \$3,000,000 was invested in the stained glass industry in the United States.



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[The illustration and description of new goods and inventions as hereunder is a permanent feature of THE KEYSTONE; our twofold object being to keep the jeweler and optician thoroughly posted on the very latest and most salable goods, and the workman at the bench equally well posted on the newest inventions and improvements in tools and appliances.]

New Watch Oiler

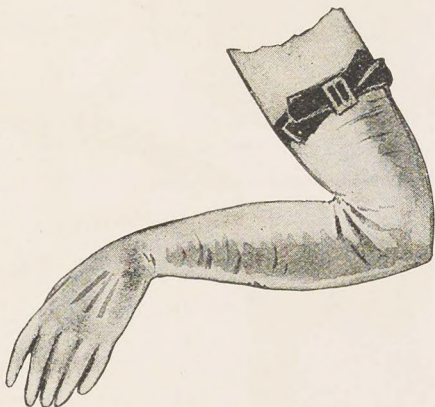
Watchmakers will be interested in the new "Fountain Oiler" shown herewith, which has been invented and patented by H. H. Nerbovig, Jr.,



himself a watchmaker, of Sheldon, Iowa. This oiler is about the size of a small fountain pen, is therefore convenient to handle and operate, keeps the oil always fresh, clean, ready for use and away from the light. It comprises a reservoir having a valve opening at one end, an air-vent tube adjustably mounted at the other. As shown in the illustration, with the cap removed, it will drop sufficient oil for all the jewels. A gentle pressure of the finger on the piston or plunger will force out sufficient oil for the winding parts, and one or two pressures will force out sufficient for the mainspring.

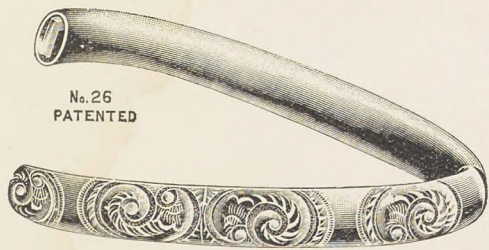
New Glove Garter

The combination of short sleeves and long gloves, which femininity has revived, has given rise to several interesting novelties in the jewelry trade. One of these, an adjustable, solid gold glove garter, is shown in the accompanying illustration, as worn. This attractive device has been placed upon the market by Chas. L. Trout & Co., 15 Maiden Lane, New York. As shown by the cut, it is a pretty bow-knot and buckle combination, which, besides being useful, lends a very appreciable artistic quality to the long-glove vogue. As such it will doubtless appeal strongly to contemporary feminine taste and should, therefore, prove a popular seller.



New Bracelets

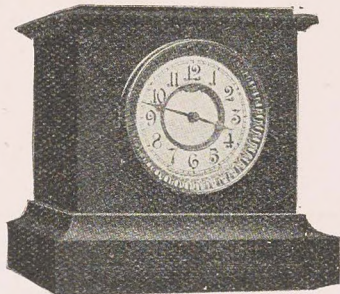
The bracelet is an article which affords considerable scope for the exercise of craftsmanship and decorative taste, and as such it is a perennial source of inspiration to the jewelry designers. Among the latest interesting products in this line are the "Bates" and the "Winna," the former of which is shown in the accompanying illustration and both of which are manufactured by Bates & Bacon, Attleboro, Mass.



The "Bates" is a handsome product, with invisible joint and a patented secret catch which no accident can open; hence it bears the sub-title, "Kant Kum Off." It is made in different patterns, artistically chased or embellished. They can be had set with the most fashionable colored stones, in various finishes—plain polished, satin, old English and Roman—and in large, medium and small sizes. The "Winna" is made of high-grade one-tenth, gold filled seamless tubing. It is made plain polished, hand chased or ornamented with various stones and in satin, old English and Roman finishes. The joint is invisible, the catch secret and the sizes are similar to the "Bates." Each bracelet is furnished in a handsome satin-lined case.

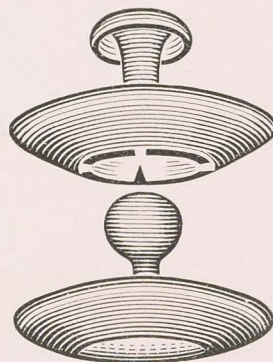
Self-Winding Clocks

Probably the most interesting of recent innovations in timepieces is the self-winding clock. The perpetual-motion idea embodied in the new mechanism gives these clocks a uniqueness that will appeal irresistibly to public curiosity. These automatic timekeepers are made by the National Self-Winding Clock Co., of Champaign, Ill. They have a pendulum movement, hour and half-hour strike and patent regulator, and are made with a great variety of cases and finishes. The clock is wound automatically by an electric current from cells of a dry battery contained within the case, and the mechanism used is so simple that any jeweler can take it to pieces, clean and oil if necessary, and put it together again, with as little delay as in the cleaning of an ordinary clock. The self-winding clock is run by a spring which is electrically wound once in every seven or eight minutes, the time of winding being less than one-fortieth of a second. The clock is regulated through a slot in the dial, and once properly regulated needs no other attention than occasionally setting and replacing the batteries in twelve to eighteen months.



New Button Cuff Fastener

In the accompanying illustration is shown a new button cuff fastener, aptly named the "Itsoezie." This is a most convenient and simple device for attaching and detaching cuffs, which should prove a popular dress accessory in this age of haste. It is made by the Chicago Cuff Holder Co., 185-191 Adams Street, Chicago. In the illustration it is shown detached. The upper portion is buttoned through the cuffs and then attached to the lower portion, which latter is used similarly to a sleeve button. These fasteners are made in gold plate and in nickel, the first-named variety being put up in handsome glass top display cases, holding three dozen pairs, each pair being in a small individual box.

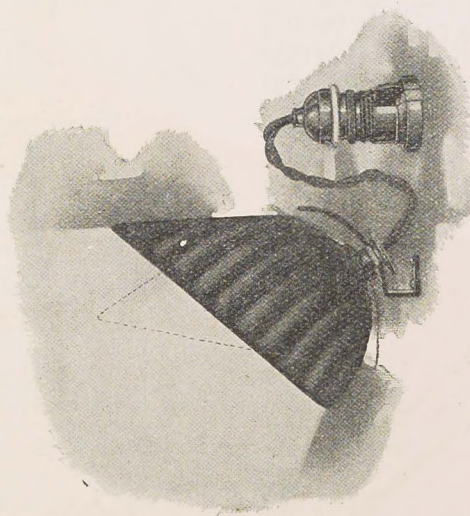


Detached

New Dust-Proof Watch Case Pendant

A patent was recently granted to Jeweler L. P. Roerig, of Adrian, Minn., on a new dust-proof pendant for stem-wind hunting and open-face watch cases. The device consists of a dust cap and washer, making the pendant dust proof. The new pendant can be used for lever-set or pendant-set movements.

New Searchlight Reflector



A new device for lighting show windows is shown in our illustration. It is named the X-ray "poke bonnet" trough reflector, and is made by the Curtis-Leger Fixture Co., of Chicago. The device is a sectional reflector fourteen inches long, of one piece of crystal glass blown into the most perfect shape for reflecting and concentrating the rays of light. The spiral corrugations are scientifically designed to break up and so diffuse the rays that the light is thrown in an

evenly-distributed flood. The entire reflecting surface is plated with pure sterling silver by a patent process giving a reflecting surface of much brilliancy and efficiency. The plating is protected with an elastic enamel which contracts and expands with the glass and cannot crack, thereby protecting perfectly the reflecting surface and retaining permanently the full brilliancy of its reflective power.

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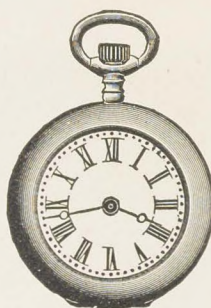
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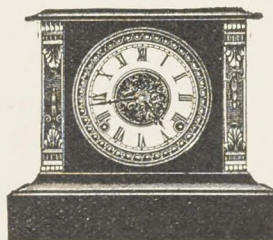
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Advertising Cuts For Jewelers

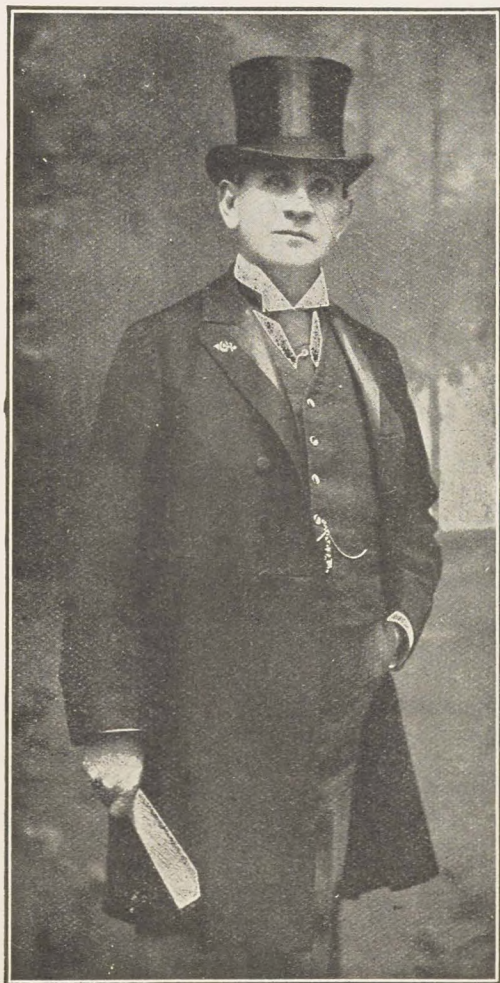
We have had specially prepared for the jewelry trade a great number of appropriate illustrations for use in newspaper advertisements, circulars, stationery, etc., and are furnishing same at a nominal cost. A few samples, with prices, are here shown.

Sheets showing the complete collection—all sizes and kinds—with prices, will be sent on request.

Order by the numbers under the illustrations. Money must accompany the order.

The Keystone Publishing Co.

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JOHN F. TURNER JEWELERS' AUCTIONEER

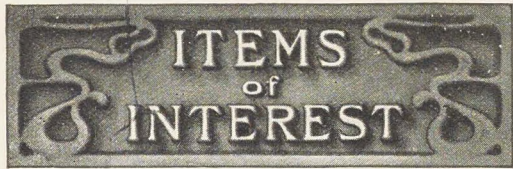
170 Broadway, Corner of Maiden Lane
NEW YORK, N. Y.

The standing of an auctioneer is best attested by the character of his patronage. All my clients are jewelers of high standing in the trade and of reputation in the community in which they reside.

I have conducted most all the large sales from New York City to San Francisco, Cal., and have to my credit the greatest number of sales, with largest percentage of profits. The secret of my success, I possess that which I profess, ABILITY.

I have just closed a very successful and profitable sale for Mr. C. A. Sterner, Allentown, Pa. If you wish this kind of a sale write at once, for demands are pressing and the times favorable.

Sales conducted in any part of the United States, or Canada.



Shaver & Burger, jewelers and repairers, Buffalo, N. Y., have dissolved partnership by mutual consent and the firm is now owned and conducted by C. F. Burger & Co.

S. S. Kaufman has purchased the interest of his partner, Mr. Loewenson, in the firm hitherto known as Loewenson & Kaufman, Fredericksburg, Va., and now conducts that business under his own name.

T. J. Dantzler, a well-known jeweler, of Corsicana, Texas, died suddenly last month while taking a bath. He was only thirty-five years old, and went to Corsicana about seven years ago, where he opened a jewelry store. He enjoyed excellent health up to the time of his death, which was a severe blow to his wife.

B. F. Reeves, for a number of years past engaged in the retail jewelry business at 1621 Market Street, St. Louis, has sold out to A. F. Niemeyer and brother. The business will hereafter be conducted under the firm-name of the Niemeyer Jewelry Company. Mr. Reeves will establish a wholesale optical tool and material business in the Star Building, St. Louis, about May 1st.

David B. Anderson, the well-known and highly respected jeweler, of Marietta, Ohio, died recently at the age of seventy-eight. Mr. Anderson, for sixty years, had been connected with the "Pioneer Jewelry Store," which was established by his father, D. B. Anderson, in 1817. He was esteemed for his integrity and amiability by a wide circle of friends both in and out of the trade. He was noted for his skill as a mechanic. A sister survives him.

Kendrick & Davis, of Lebanon, N. H., have issued an interesting booklet as a supplement to catalogue No. 5. This booklet shows the different kinds of staking tools made by the firm, the manufacture of a number of those shown in catalogue No. 5 having been discontinued. It contains twenty-four pages, nearly all of which are illustrated. Prices are quoted, but the reading matter is confined to brief technical descriptions of the articles shown.

Mack A. Hurlbut, the enterprising jeweler, of Fort Dodge, Iowa, was one of the principal speakers at a banquet given by the Commercial Club of that city last month. Jeweler Hurlbut was selected to respond, on behalf of the retail dealers, to the toast of "the Retailer," and his speech attracted considerable notice and was printed in its entirety by a local newspaper. It embodied a humorous and interesting poem on the woes of the retailer, was optimistic throughout and brimful of practical business sense.

The Eastern trade are warned against a man named David Strain, alias David Hornstein, who is wanted by the authorities of Baltimore, Md. He is thirty years old, five feet eleven inches in height, has light curly hair and sandy moustache and speaks broken English. From a jeweler in Illinois comes another caution regarding the operations of a fellow, who calls on the trade and requests to have a ring weighed. The ring is stamped 14 K., bears certain initials and appears to be solid gold. He offers to sell it for a few dollars, and jewelers who take him at his word find, after he has departed, that the ring is a veneered sham.

Henry Leuy, a long-established jeweler, of Montgomery, Ala., died last month in his seventy-sixth year. Deceased had worked continuously at the bench for sixty-two years.

Wm. F. Rainey and Chas. A. Acly have severed their connection with H. M. Stilson, the Pittsfield, Mass., jeweler, and have formed a partnership and opened a jewelry store in that place under the firm-name of Rainey & Acly.

In the article entitled "The Modern Jewelry Store," in our Easter number, we omitted to state that the plans and fixtures of the handsome stores of Adam Imig, Sheboygan, Wis., and Robert J. Taupert, Las Vegas, New Mexico, illustrated in that article, were the work of the M. Winter Lumber Co., Sheboygan, Wis. We selected these stores for illustration and description as representative types of the many beautiful jewelry stores in all parts of the country furnished with the well-known "Winter" fixtures. Among the stores in which these fixtures have been recently installed are: G. A. Parkins, Ord, Nebr.; E. H. Overton, Westfield, N. Y.; Raines Bros., Maryville, Mo.; A. Dobrowsky, Redding, Cal.; Haldor Anderson, Fessenden, N. Dak.; Max Greener, Shelbyville, Ky.; W. M. Shlaes, Hancock, Mich.; R. G. Rutherford, Mt. Vernon, Ill.

Annual Meeting of the Gorham Mfg. Co.

The annual meeting of the stockholders of the Gorham Manufacturing Company was held at the company's office in Providence, March 14th. The meeting was called for the purpose of making certain amendments to the by-laws and for the election of directors for the ensuing year and for such other business as might legally come before the meeting. Edward Holbrook, president of the corporation, presided at the meeting, which was largely attended, 47,990 shares of stock being voted out of a total of 50,000 shares. Amendments to the by-laws were presented and adopted, as recommended by the board of directors.

The annual report of the directors to the stockholders was read and placed on file. The following persons were elected for directors for the ensuing year: Edward Holbrook, George E. Martin, J. F. P. Lawton, John S. Holbrook, Herbert J. Wells, Russell Grinnel, E. F. Aldrich, F. C. Lawton, Henry S. Sprague. Of the new directors, Herbert J. Wells is president of the Rhode Island Hospital Trust Co., Providence, R. I.; Henry S. Sprague is of the firm of Sprague-Cooke Co., and George E. Martin is vice-president of the Phenix National Bank.

Following the meeting of stockholders, the new directors met for organization and elected the following officers: President and treasurer, Edward Holbrook; vice-president, John S. Holbrook; assistant treasurer and secretary, John F. P. Lawton. The reports for last year's business made the best showing in the company's history, proving that the corporation is in a most prosperous condition.

New Associations to be Organized

A meeting for the purpose of organizing the Illinois retail jewelers will be held on April 10th, at Springfield, that State.

A meeting of the Massachusetts jewelers will be held at the American House, Boston, on April 10th, for the purpose of organizing a retail jewelers' association.

The Retiring President of the Dennison Mfg. Co. and his Successor

After a service of forty-seven years, ranging from errand boy to president, Henry K. Dyer, has just resigned the presidency of the Dennison Mfg. Co., and is succeeded by J. F. Talbot, who for a number of years past has been a director and manager of the Chicago branch. At the same meeting, which was held March 13th, Charles S. Dennison, vice-president of the company, was likewise made treasurer, and will fill both offices. Mr. Dyer, the retiring president, entered the employ of Dennison & Co., about 1859, when the firm occupied a small back room on the second floor of 17 Maiden Lane, New York City. The New York office of the company had been opened up about four months previous by Henry Hawks, who was then a partner in the concern. Mr. Hawks had as his helpers an assistant and a boy, the boy being Henry K. Dyer, who subsequently moved up step by step as clerk, bookkeeper, traveler, salesman, manager of the New York branch, director, treasurer, vice-president, and at the end of thirty-five years' service was made president of the corporation, which position he has held for about twelve years.

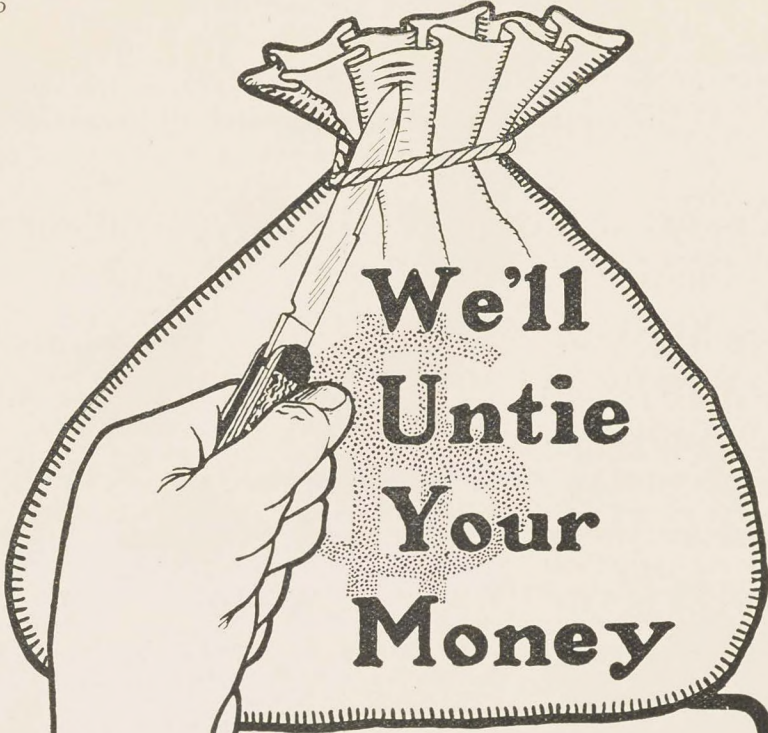


President J. F. Talbot

His successor, J. F. Talbot, was born and raised near the Dennison factory, in a suburb of Boston, and went to work in the factory in 1867. At that time the improved machinery of to-day was not in use and most of the work turned out was done by hand. Mr. Talbot early showed a knowledge and capacity that subsequently won for him a steady advancement, and during his factory service he had the reputation of cutting more tags per day than any other workman in the shop. His many good qualities attracted the attention of Chas. E. Benson, the manager of the Chicago office, and he went there in 1870, and for six years Mr. Talbot worked as general assistant at all kinds of duties at the new office. In 1876 it was decided to establish another branch at St. Louis, and Mr. Talbot was selected as manager. Ten years later, at the death of Mr. Benson, he moved back to Chicago to take up the management of the Western branch, and became a director of the corporation.

Mr. Talbot has been actively associated with many of the trade associations of Chicago and the West, and is an enthusiastic believer in the great possibilities of the Western territory as being the greatest market on this continent, and has well earned the high position to which he has just been elected by his fellow-workers. The Dennison Mfg. Co. is one of the largest establishments connected with the jewelry industry, having been established in 1844 and incorporated in 1878, with a capital of one million dollars, and doing the largest business of its kind of any establishment in this, and perhaps in any other country, with an immense manufacturing plant at Roxbury, Mass., and large handsome salesrooms in the principal cities of the country.

"The Keystone cannot be improved; typographically it is a beauty, and technically we could not get along without it. All articles are interesting to us."—Bush & Leffler, Jewelers, Iola, Kansas.





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Every jeweler in the country has more or less money tied up in "dead stock." Once "dead" it's always "dead." And each season makes its addition to the accumulation of bygone years. This is the millstone about the neck of your business that is slowly but surely dragging it down into bankruptcy—possibly so slowly that you will not realize it until it is too late. But sooner or later the time will come when this "dead stock" will sell you out unless you have been fortunate enough to appreciate the evil in time, and sell it out.


We are "dead stock" experts. We can sell, without misrepresentation, all the goods that you find "unsalable"—expensive bric-a-brac, hollow-ware, small out-of-date jewelry, etc., and in doing so can place from \$2,000 to \$5,000 a week in your cash drawer.

We succeed in satisfying both buyer and seller. The result is that when we complete your sale we leave you a long list of new customers. Let us send you some valuable information in the form of testimonial letters from jewelers who have brushed away the cobwebs of prejudice and indulged in a "M. & T. Business House-Cleaning." This information is worth money to you. Write for it to-day, stating the size and condition of your stock, and whether there have been any auctions in your town recently.

Mitchell & Tillotson
JEWELRY AUCTIONEERS
37 Maiden Lane New York City

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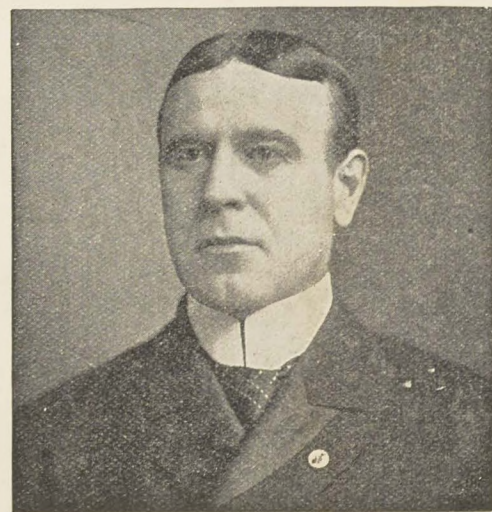
Refer to the following

J. P. Bader, Clarksdale, Miss.	Geo. W. Kates, Newton, Kans.
Joe Freedlander, Memphis, Tenn. (2 sales)	Wuerth & Son, Leavenworth, Kans.
M. Maloney, Birmingham, Ala. (2 sales)	Warren & Warren, Paducah, Ky.
Douglas Jewelry Co., Guthrie, Okla. (2 sales)	Raines Bros., Tarkio, Mo.
E. K. Crothers, Bloomington, Ill.	S. Waldman, Bloomington, Ill.
W. Akenhead, Lake Village, Ark.	

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**H. J.
HOOPER**

Auctioneer

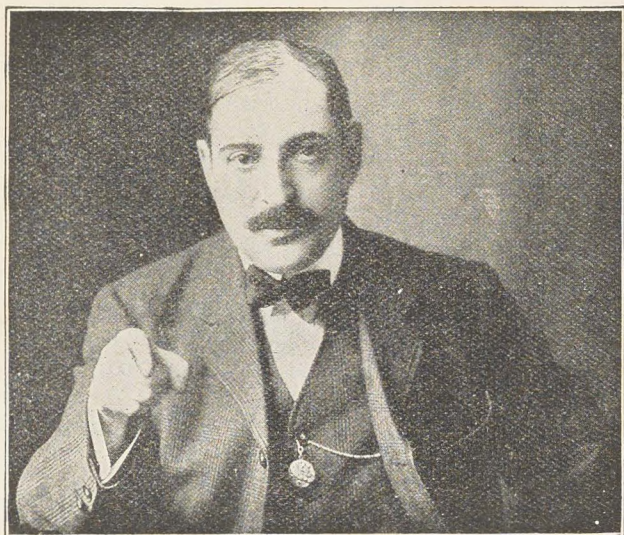


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Write at once for dates. Correspondence solicited from all parts of the United States and Canada. All communications treated with strictest confidence.

M. L. JALONACK, Jewelers' Auctioneer

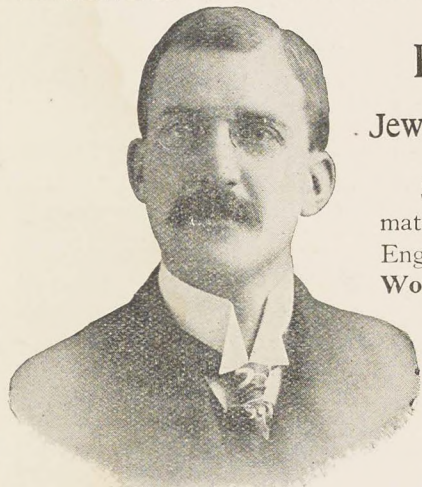
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W. E. Wallace, Moscow, Idaho

Mermod, Jaccard & King, St. Louis, Mo.
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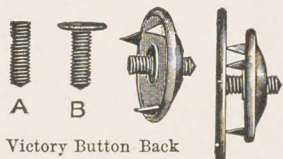
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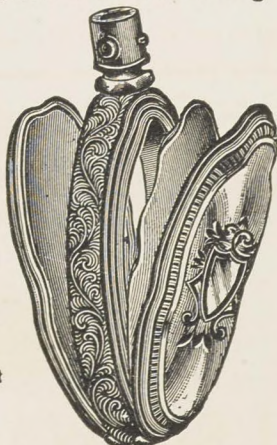
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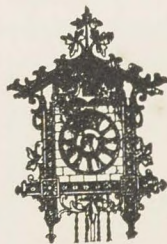
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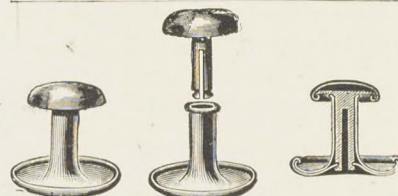
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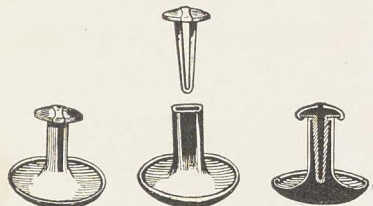
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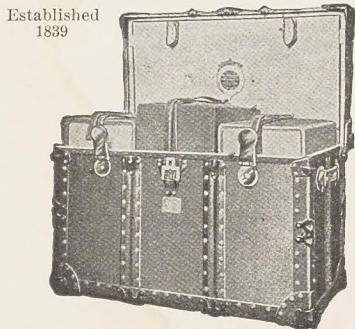
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ALL QUALITIES OF GOLD AND SILVER, in Plate, Square and Round Wire, Rolled to Any Gauge.

ALL QUALITIES OF GOLD AND SILVER SOLDER

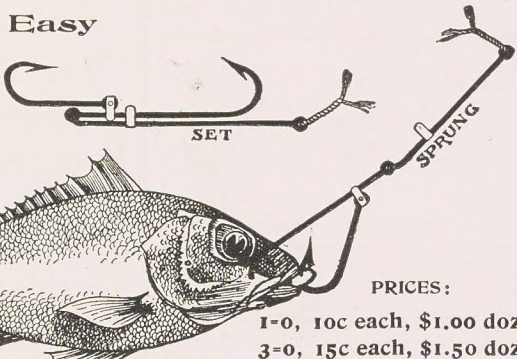
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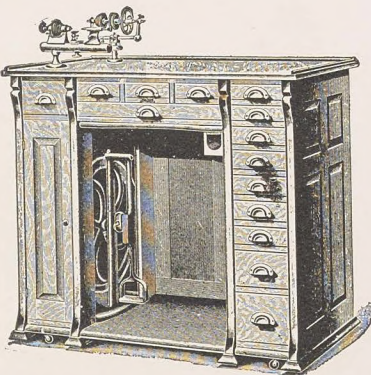
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We have been engaged in the manufacture of **watchmakers workbenches** for almost a quarter of a century. We are the **originators of the modern bench** and know a thing or two about them.

Our benches are made of different kinds of wood, such as Mahogany, Walnut, Quarter-sawed Oak, Plain Oak, Birch and Ash. They are **honestly and well made** in every detail and of the best seasoned and kiln-dried lumber. We finish them in any shade of color desired. We ship our benches to every State in the Union and to foreign countries as well.

Besides benches we make Watch Repair Cases, Jewelry Repair Cases, Material Cabinets, Material Cases, Glass Cabinets, Mainspring Cabinets, Optical Cabinets, Lens Cabinets, etc. We make to order special benches and woodenware of every description that an up-to-date watchmaker needs.

WATCHMAKERS AND JEWELERS

Send for our new illustrated catalogue and order what you want through your Jobber. **Insist upon getting our make.** Our name-plate is on every article we make.

Almost all Jobbers handle our goods.

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Globe Lever and Link Lever Button Back
For hard-soldering. Can be applied to any button
Made in Solid Gold, Gold Filled and Silver

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Enameled on
**WATCH DIALS,
CAPS and LIDS**
Plain and
Colored

Can be made from
any photograph
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Send 5 two-cent stamps for a beautiful sample dial and price-list

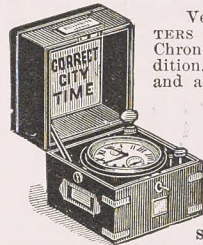
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115 Dearborn Street CHICAGO, ILL.

AWARDS FOR

H. H. Heinrich's Marine Chronometers

CHICAGO, 1893 PARIS, 1889 BERNE, 1859



Very good CHRONOMETERS on hand; second-hand Chronometers in first-class condition. Repairing, springing and adjusting Chronometers. Also fine watch repairing for the trade.

John Schroeder & Co., Inc.

T. C. REDFERN, Mgr.
Successors to H. H. Heinrich

192 Water Street, NEW YORK

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I have employed Mr. THOS. C. REDFERN to my entire satisfaction for many years in all description of Marine Chronometer repairs, also in new work. I know of no one who has a better general knowledge of chronometer work than he has. He has also done a great deal of fine and complicated watch repairing for me, and I can recommend him to anyone desiring his services.

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Non-pull-out Neck Chain Snap is a patented snap that insures the wearer against loss of

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for it positively will not pull out.

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14 Karat	Small, \$7.00 per doz., net
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Want to learn it right
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You want to attend our College. We teach these branches thoroughly from beginning to end. Our prospectus gives you full information, and it is free for the asking. Better send for it to-day. See ad. on page 656.

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When others fail you we guarantee satisfaction. A trial will convince. Prices very reasonable.

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I give close, personal attention to repairs sent me. Promptness my motto. Send for my printed Price-List, which is free for the asking.

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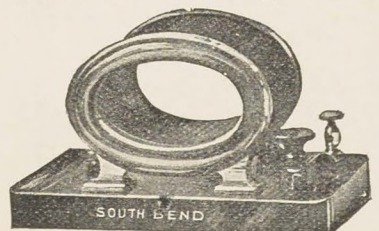
For Scarf Pins, Studs and Lace Pins. The most practical and only adjustable one invented. Price, \$1.50 per doz. For sale by all wholesale jewelers and material houses. Sample by mail, 25c; in 10 K. gold, \$1.00; 14 K. \$1.25. M. CROHN, Mfr. & Invt. 48 & 50 Maiden Lane, N.Y.

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Every jeweler that sells rings cannot afford to be without an assortment of Wells' Perfect Ring Adjusters for immediate use when wanted. 1 doz. solid 10 K. gold, std. sizes, \$3.75; 1 doz. gold filled, std. sizes, \$2.00; 1 doz. metal, std., .85c. Sent prepaid at once (only on receipt of price). If you will mention Order No. K., I will forward at same time, prepaid, one game of "Grip" for each dozen Adjusters ordered. Address, Chester Wells, Jeweler, Meshoppen, Pa.

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Watch Repairing for the Trade

We employ the best expert Watchmakers. Send your work to us, we do the best work at the lowest possible prices. Send for latest 1906 price-list. We inspect and test every watch before leaving our shop.

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Write for our Free Book, "How to be a Watchmaker." A postal will do. STONE'S School of Watchmaking, Globe Building, St. Paul, Minn.

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made easy, effective and 50 to 75% cheaper than kerosene, gas or electric lights by using our

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Brilliance and glitter is increased; they can be used anywhere for any purpose, in or out-door, by anyone. Over 100,000 in daily use during the last eight years. Every lamp guaranteed. We call special attention to our new Low Pressure and Gravity Gasoline Lighting Systems. Write for "K. S." Catalog; it tells all about them.

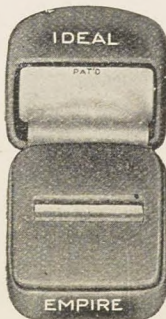
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If he cannot furnish them to you, write to us direct. Our patented "Empire Automatic Metallic," "The Ideal," "The Dandy" are all made of the best tempered steel, will not warp nor shrink, graceful dome top and have many other advantages not obtainable in other boxes. They are the best, the cheapest and most practical jewelry box on the market.

Our silverware cases will please you both as to quality and prices. No one makes better paper boxes than we do. "Mail orders appreciated." Don't wait until we are rushed.

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No advertisement inserted for less than 25 cents.

Under heading "Situations Wanted," ONE CENT per word for first twenty-five words. Additional words and advertisements, THREE CENTS per word.

Under all headings except "Situations Wanted," THREE CENTS per word.

Name, address, initials and abbreviations count as words, and are charged for as part of the advertisement. No display other than two-line initial letter.

To insure insertion money must accompany all orders for advertisements, and copy must reach us not later than the 25th of each month for insertion in the following month's issue.

If answers are to be forwarded, TEN CENTS in postage stamps must be enclosed.

The real name and address of every advertiser must accompany the copy of the advertisement.

Advertisers who are not subscribers must send 15 cents (special issues 25 cents) if they desire a copy of the paper in which their advertisement appears.

Address,
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809-811-813 N. 19th Street, Philadelphia, Pa.

SITUATIONS WANTED

Under this heading, ONE CENT per word, for first twenty-five words. Additional words and advertisements, THREE CENTS per word. No advertisement inserted for less than 25 cents.

WATCHMAKER and jeweler desires position, A1 salesman, good talker and jolly fellow, single and of good address. Best of references. "G 666," care Keystone.

YOUNG man, graduate optician and jeweler would like position. No bad habits; best refs.; own tools and trial case. All inquiries answered. "J. J. J., 434 Spices St., Apron, Ohio.

YOUNG man as watchmaker, jeweler and fair engraver; owns all tools. Will work for reasonable salary; not afraid of work. All inquiries answered. "J 712," care Keystone.

BY all-around man, as watchmaker, jeweler and engraver, to take full charge of store on per cent. or commission. No bad habits. Best of reference. Have own tools. R. B. Philbrick, Belvidere, Ill.

WATCHMAKER wants situation at trade work. Will work on percentage only. Eastern cities; age 41. First-class workman; attentive to business. "C 709," care Keystone.

YOUNG man desires position as second watchmaker or to finish trade under first-class man. Will wait on trade; no bad habits; good address. Prefer Illinois or West. Write for particulars. "C 566," care Keystone.

WATCHMAKER, good at all kinds and grades of watches; 10 years' exp.; good salesman, capable of taking charge. Unmarried, tall, good address and good refs. Free 30th April. "V 711," care Keystone.

BY clock repairer and engraver; can help on watch and jewelry repairing. Good salesman and window dresser. Address, "Watchmaker," 1909 Cleveland Ave., New Orleans, La.

THOROUGHLY practical watchmaker, with tools, desires position at once. Competent to handle railroad work. New England States preferred. Address, "E. H. B.," 45 Charles St., Springfield, Mass.

BY young man, 3 years' at bench at watch, clock and jewelry repairing. Own tools; refs. furnished; state wages. Box K, Perryville, Mo.

BY young man; 3 years' exp. at watch, clock and jewelry repairing. Willing to work. A1 refs. Own some tools. Box 981, Jefferson, Iowa.

WOULD like to connect myself with some good wholesale house in New York City as managing a department or some good, responsible position. Have been in retail business for 6 years; know most anything about the business. Salary no object—wish to work myself up for future. Am 28 years old; can furnish bond if necessary. "H 684," care Keystone.

A THOROUGHLY practical and competent watchmaker of 24 years' exp., desires a good, permanent position with a first-class retail firm. Competent to take full charge of repair department, expert in watch repairs, exp. on railroad and complicated work; graduate and practical optician—studied with Dr. Knowles & Ferguson. Good jeweler and plain engraver. Salary \$25. Best refs. "R 692," care Keystone.

YOUNG man, 29, experienced watchmaker, jewelry repairer and plain engraver; 11 years' exp. Best refs. furnished from present and former places, can speak English and German. Address, 320 Main St., Green Bay, Wis.

OPPORTUNITY to finish trade under an old and competent watchmaker and jeweler by young man, age 22; strictly moral habits. Best refs. J. G. Bennett, Elizabethtown, Ohio.

FIRST-CLASS watchmaker, jeweler, fair engraver. All tools, no bad habits; industrious, steady. South preferred; like to hear from good houses. Conrad Kohler, 447 State Street, Schenectady, N. Y.

WATCHMAKER, engraver, jeweler; optical graduate—two colleges. All-around young man; long exp. Have tools, good refs. Address, Hayward Murdock, Lock Box 149, Sawtelle, Cal.

SITUATIONS WANTED

BY watchmaker familiar with railroad, high-grade Swiss and complicated watches—years of exp.; competent to take charge. Complete set tools; married. Would accept position at once. Excellent recommendations. "D 697," care Keystone.

WATCHMAKER and engraver, married, age 30, wants position in West or Southwest. Can handle railroad work. Sample engraving and refs. first letter. "E 694," care Keystone.

ENGRAVER; expert letter and monogram commanding salary \$20 to \$25 per week, with reliable firm, or would like to know of good opening for trade shop. "E 688," care Keystone.

UP-TO-DATE watchmaker, jeweler and engraver, with lathe and all tools. "S 700," care Keystone.

GRADUATE optician desires position about May 15th. Can do watch and jewelry repairing. "R 696," care Keystone.

AS watchmaker, engraver and salesman; capable taking charge when necessary. No liquor or tobacco fiend. State salary. "C 682," care Keystone.

YOUNG man desires a position as watchmaker, jeweler, engraver and salesman. No bad habits. "T 669," care Keystone.

YOUNG man of good habits wishes position as watchmaker by June 15th, or before. A. Kingsbury, 54 W. Fulton St., Gloversville, N. Y.

EXPERIENCED refracting optician desires position with jeweler in live city. Will work on salary or per cent. F. R. Jameson, 500 McKinley, Bay City, Mich.

BY a jewelry salesman, position May 1st. Road job pref. Ad., "B 687," care Keystone.

BY experienced watchmaker and retail salesman, who wishes to quit bench-work on account of health, a position as traveling salesman with good jewelry or optical house. Salary second consideration. "G 672," care Keystone.

YOUNG man, single, of good habits, American, having tools, lathe and bench, as assistant with chance for advancement. Optical graduate; do some plain script engraving. "Jeweler" 2110 Sheridan Ave., N., Minneapolis, Minn.

POSITION wanted on the Pacific coast, by a first-class watchmaker. Specialty R. R. work. Address, "D 679," care Keystone.

ENGRAVER; does also jewelry and clock work. Good salesman, three years' exp. Best ref. Age 21; Pennsylvania preferred. "Engraver" 738 1/2 N. Sixth St., Allentown, Pa.

ENGRAVER and second watchmaker wants position in good city store, fine salesman; age 22; best ref. Central states pref. Landis School of Engraving, Detroit, Mich.

YOUNG lady as first-class letter and monogram engraver; willing to act as saleslady. Would prefer to work in Albany, Troy, Utica or near by. Best ref. "L 628," care Keystone.

BY first-class optician and jeweler, 3 years' exp. Will register in any state desired in ophthalmology; good refs. State salary in first letter. "M 699," care Keystone.

HEAD engraver for one of the largest houses in United States, desires to make change. Experienced in waiting on fine trade. "C 713," care Keystone.

ABOUT June 1st, by first-class all-around man in town not less than 10,000. 20 years' exp.; age 38; all tools; married. Correspondence solicited. "A. A.," care A. Schenk, 106 Sigel St., Chicago, Ill.

BY first-class watchmaker; can do all kinds of hard soldering, 15 years' exp.; assistant optician; some stone-setting. Own tools, married. Steady position; best ref. At once. Chas. Koerber, Devils Lake, N. Dak.

AS watchmaker; young man, 23, 4 years' exp. Have good lathe and all necessary tools. Can turn out watch in good shape; also do clock and jewelry repairing. Salary, \$10—or what I earn. Good refs. In or around Southern Ohio preferred. Address, J. L. Michael, Hillsboro, Ohio.

OPTICIAN, experienced refractionist and salesman; age 29, 11 years' exp. Objective or subjective method of examination. Good habits. Unquestionable refs. as to character and ability. "C 618," care Keystone.

BY watchmaker, jeweler and plain engraver; 5 years' exp. Own lathe, tools, etc. Western States preferred. Address, R. C. Dierdorf, Cedar Falls, Iowa.

THOROUGH, practical refractionist and watchmaker, years of exp. in fitting complicated cases, using latest methods, practical frame adjuster, good salesman, good address. Refs. "D 528," care Keystone.

STONE-SETTER, manufacturing and jobbing jeweler of exp., with reliable firm. Sober, healthy and rapid worker. Give particulars and salary in answering. "B 615," care Keystone.

YOUNG man, good competent watchmaker, jeweler, optician and plain engraver, desires to make a change about May 1st. Position must be permanent and willing to pay good wages. Iowa, Wisconsin, Illinois or adjoining states preferred. State full particulars what you have to offer in first letter. "S 719," care Keystone.

BY first-class engraver and saleswoman in Colorado or farther West—Nevada preferred. Refs. first-class. Address, Miss March, room 1201 Heyworth Building, Chicago.

SITUATIONS WANTED

POSITION wanted by engraver; married man, age 23; experienced. Address, "P. O. M.," Box 342, Warren, Ind.

TEXAS expert watchmaker and salesman desires change with first-class house, do not answer unless you want a man of fine ability; with fine refs. State salary and hours in first letter. Address, Box 55, Corsicana, Texas.

PERMANENT situation with good house as manager of repairing department. Good watchmaker and salesman, long exp. and conversant with jewelry business. Character, habits and ref. the best. Address, "C," care Swarthchild & Co., Jewelers' Bldg., Chicago.

YOUNG man as optometrist and engraver, am registered in Minnesota. Address, 2639 Newton Ave., N., Minneapolis, Minn.

GRADUATE optician, first-class watchmaker; Illinois or Iowa preferred. Can come at once; state salary in first letter. Don't use liquor or tobacco; ref. best. "K 721," care Keystone.

GRADUATE optician, first-class watchmaker; \$15 per week. Do not use tobacco or liquor. Ref. from present employer. Lock Box 9, Rockwell City, Iowa.

CAPABLE watchmaker and salesman, practical, competent on all grades of watches; Good jewelry repairer, engrave some. Age 30, single; 9 years' exp.; tools, refs. Central, Western or Southern States preferred. Please state requirements, wages, hours. G. L. Abbott, 217 Pine St., S., Lansing, Mich.

POSITION wanted by young man with fair exp. as watchmaker, engraver, graduate optician; have all bench tools and good trial case. No bad habits, not afraid of work. Can furnish best ref. from last employer. Iowa, Wisconsin, S. Dakota, preferred; wages \$15 per week. "P 717," care Keystone.

AS watchmaker, engraver and optician, 5 years' exp., good habits and refs.; would buy interest in suitable place. Let me hear from you. Salary low to start. Chas. W. Chase, 25 East Tenth Street, St. Paul, Minn.

IF manager for first-class jewelry store is wanted, also one who understands all kinds and classes of work; good optician, salesman, etc. 10 years' exp., strictly sober. Write, J. E. Kessler, Box 722, Wellston, Ohio.

WATCHMAKER, plain engraver, stone-setter and jewelry repairer, graduate optician wants position on or before May 1st. Single, age 24; best habits. "G 723," care Keystone.

YOUNG man, first-class engraver, honest, willing and industrious. Best refs. from former employers. For samples and further particulars address, "Engraver," 650 Addison Ave., First Flat, Chicago.

WANTED situation with first-class watchmaker to finish trade; worked some at trade, have fine set of tools. A. C. Ballard, 808 Walnut St., Baraboo, Wis.

BY good engraver, who does jewelry work and also good assistant watchmaker; 20 years' exp. A good, steady, reliable and quick workman for any first-class retail house. Permanent place and good wages expected. Address, "P 726," care Keystone.

PERMANENT position. Watchmaker, jeweler; take full charge. Must have ability, good habits, good refs.; rapid worker. Full particulars first letter, \$18 start. Herbert K. Smith, Far Rockaway, N. Y.

PERMANENT situation wanted by refractonist as manager of optical store or department. Highest ref. given and required. Ad., "R 727," care Keystone.

COMBINATION watchmaker, manufacturing, jobbing jeweler and stone-setter, position with strictly first-class firm. If looking for man that can deliver the goods, write me. "B 616," care Keystone.

HELP WANTED

UNDER THIS HEADING THREE CENTS PER WORD

FIRST-CLASS watchmaker, jeweler and plain engraver; capable of waiting on trade. State wages wanted; name refs. in first letter. C. H. Clifford, Platteville, Wis.

STRICTLY first-class watchmaker and engraver. Position permanent and good salary. Fine position to right man. Must be sober and reliable. North Texas town. "S 710," care Keystone.

A GOOD watchmaker and optician or engraver. Must be sober and reliable. Permanent position to right man. G. N. Moore, Marion, Ill.

FIRST-CLASS clock and watchmaker for large store—city in New York State. Permanent position; \$15 week, with advance. Send photo., refs. and exp. in answer. Address, "J 705," care Keystone.

GOOD, all-around jeweler and stone-setter for first-class retail store. Don't apply unless A1 workman. Position permanent. State particulars and salary expected. Box 496, El Paso, Texas.

AT once, a thorough competent watchmaker, A jeweler and diamond-setter. Would prefer a man who can also do plain script engraving. Permanent position for the right man. Salary, \$25 per week. Ignatius Fried, Mobile, Ala.

FIRST-CLASS watchmaker, engraver and optician. Permanent position in nice store—bench in front window; no clock work. Pop. 4000. State age, exp. and salary expected. No better place to work. "M 695," care Keystone.

HELP WANTED

A COMPETENT watchmaker; permanent position. Address, V. J. Tiefenbach, Dodge City, Kans.

COMPETENT watchmaker; one who is good optician and can do jewelry repairing pref. State salary wanted. Address, C. Granville, Billings, Mont.

FIRST-CLASS watchmaker and engraver—one well up on railroad watches. Permanent situation; must have first-class ref. Good wages to the right man. Wanted at once. I. Sulzbacher, Florence, S. C.

AT once, strictly first-class watchmaker, who can do plain engraving and jewelry repairing; good, all-around man with tools. State age, exp., and refs.; send sample engraving. Permanent position. Wines & Creekmore, Richmond, Ky.

AT once, a first-class watchmaker and fair engraver; one who can do some jewelry repairing. Permanent position. Salary, \$20 to start; if satisfactory, will raise to competent man—no other need apply. First-class refs. and sample of engraving in first letter; others will not be answered. Apply to A. Rabinowitz, Stamford, Conn.

FIRST-CLASS watchmaker, jeweler, engraver, one who understands optics pref. Age over 25. Salary begins with \$60 to good, reliable man; permanent position; give exp. Any time in May or June. C. F. Burger & Co., Buffalo, Wyoming.

A TRAVELING man who has good established trade in Central, Southern or Western territory. A position open for a first-class man June 1st. Lindenberg, Strauss & Co., wholesale jewelers, Carew Building, Cincinnati, Ohio.

FIRST-CLASS watchmaker and optician who passed California State Board; permanent position; best of refs. Finest climate in United States. Position open May 1st. Address, E. D. Grandmason, Ocean Park, Cal.

YOUNG man to finish trade under fine watchmaker, jeweler, engraver and optician. Store exp.; good clerk; age above 21. Gilt-edge ref. required. One who can engrave. State wages first letter. Address, "Jeweler," 404 E. State Street, Jacksonville, Ill.

STONE and pearl setters on close set work; position permanent. Fishel, Nessler & Co., 83 Crosby Street, New York City.

WATCHMAKER able to engrave; also a jeweler; thorough and competent men. Must have good refs. Address, W. H. Mendham, Dawson, Yukon Territory.

A FIRST-CLASS jeweler, stone-setter and clock repairer. Give exp., refs. and salary in first letter. Single man pref. Good wages and permanent position. Ad., "J 683," care Keystone.

JEWELER; good first-class jobber, clean and fast workman. Steady job and good pay. Give refs., etc., in first letter. Address, A. J. Stark & Co., Denver, Colo.

FIRST-CLASS watchmaker, jeweler and engraver. Must own watchmaker's tools, good salesman; not afraid to work. \$20 per week; permanent position. Full particulars, sample engraving first letter. Do not answer if you have not the required ability. Southern. Address, "C 680," care Keystone.

TRAVELING salesman wanted to sell jewelry, bags, purses and combs for old-established wholesale house in the West. Nebraska and Kansas territory. Willing to take the right man in partnership. First-class refs. given and required. "R 667," care Keystone.

MANUFACTURING jeweler for first-class new work. Salary, \$30 per week to the right man. Address, Box 721, Denver, Colo.

AT once—first-class script and cipher monogram engraver and assistant watchmaker; must be man of exp.; salary \$20; send names of last two employers as ref. and samples of engraving; state age and years' experience. Birely & Son, Oshkosh, Wis.

FIRST-CLASS watchmaker; one who can do general job work. "S 701," care Keystone.

FIRST-CLASS optician and engraver wanted at once. Good wages, and will increase if worthy of it. W. C. Bryant, Bangor, Me.

AT once, young man to do jewelry and clock repairing and assist on watch work. Send ref. and wages expected in first letter. Jos. Schottdorf, Defiance, Ohio.

YOUNG man to do jewelry repairing and plain watch work. Ref. required. Chance to work up. R. Perlen, Utica, N. Y.

A WATCHMAKER and engraver at once. Single man pref.; steady employment; state wages wanted and ref. G. Dal. Fox & Bro., 11 Front St., Milton, Pa.

AT once—first-class watchmaker, one that engraves preferred; good permanent position to competent man. Philip Jacoby, Kalispell, Montana.

GOOD watchmaker, salesman and plain engraver, one having drug experience preferred. Give age, experience, references and salary first letter. Must own tools. A. F. Wilson, Neoga, Ill.

FIRST-CLASS watchmaker, good engraver and salesman, one able to take charge of repair work. A permanent position and good salary to the right man. Only sober, steady men need apply. Wm. Lambrecht, 1576 Milwaukee Ave., Chicago, Ill.

WE want to employ a first-class experienced traveling salesman for Wisconsin and part of Minnesota. Address, Otto Young & Co., Heyworth Building, Chicago, Ill.

HELP WANTED

WANTED at once—watchmaker and optician, we have our own tools. Write to Friedman Bros., Caldwell, Noble County, Ohio.

MANUFACTURING jeweler to run shop in connection with retail store, must be good in new work, special order, etc. Any nationality will do, but must be good workman, wages \$20.00 week. Harris & Esterly, Duluth, Minn.

WATCHMAKER and jeweler at once, \$12.00 to start. Samuel Kaufman, Chatham, N. Y.

WE want a good man for general watchwork, single man preferred. Steady position, good wages in a Chicago retail store. Applicants must furnish good references. Address "Edward Lang," Room 1201 Heyworth Building, Chicago, Ill.

SOUVENIR spoon bowl engravers, either salary or commission, or both. Ullstrom & Company, Memphis, Nebraska.

WATCHMAKER and engraver at once. Must be first-class on railroad work. Rapid and accurate. Permanent position to right man. If not qualified, do not answer. Robert J. Taupert, 606 Douglas Ave., Las Vegas, N. Mex.

WATCHMAKER, young man with 2 or 3 years' experience at bench. Address, "F 715," care Keystone.

WANTED two reliable men with experience in retail store. Watchmaker and engraver, also second watchmaker to do clock and jewelry repairing. State experience and salary. Ross Haseltine, Kokomo, Ind.

YOUNG man who has knowledge of jewelry and clock repairing, and willing to assist at waiting on trade and keeping stock; will start at \$12.00 per week, at once. E. F. Randolph, Williamson, W. Va.

FIRST-CLASS diamond setter and manufacturing jeweler. Jessop, San Diego, Cal.

WATCHMAKER, one who is competent to take charge of railroad inspection and railroad watches; a permanent and pleasant position to the right man. Ad., "W 729," care Keystone.

WANTED, an experienced cut glass salesman. Address, Feeney & McKanna, Inc., Honesdale, Pa.

WANTED, first-class letter, monogram and general engraver. Jessop, San Diego, Cal.

WANTED

UNDER THIS HEADING THREE CENTS PER WORD

TO buy a jewelry store, town of 10,000 or over. Frank H. Carrs, Decatur, Ill.

SECOND-HAND bench lathe, about 7-inch swing; 26 to 30 inch bed, also slide rest. B. S. Gaylord, Owosso, Mich.

A SMALL screw-cutting lathe, state size, make and price. W. M. McNeal, Atlanta, Ga.

THE advertiser, thoroughly experienced worker and business man, would like to correspond with jeweler, Central Western or Northwestern States preferred, contemplating selling out, in market for jewelry store from \$5000 to \$8000, part or half cash, balance time. Must stand close investigation, nothing but clean, first-class propositions considered. Town of about 10,000 or over. Would also consider buying part interest for above amount in store if control or equal share in management is given. Will exchange references. "E 698," care Keystone.

IVETT Lathe No. 2, also Revolvable Tailstock and Quill. Must be in good condition. Geo. G. Koerberle, 1340 W. 30th St., Los Angeles, Cal.

GENUINE 1 x 2 Moseley slide rest. Good order and cheap. Chappell & Son, Eau Claire, Wis.

TRIAL lenses with case. Address, "H 668," care Keystone.

PARTNER in watchmaking, jewelry and optical business. Will sell interest in one or two jewelry stores located in Holly Grove, Ark. Stores 20 miles apart. No competition. Stock on hand \$5000. All the repair work that two men can do. If interested, address, W. A. Hartline, watchmaker and optician, L. Box 235, Holly Grove, Ark.

LOCATION in good lively hustling town, would like to purchase location if suitable one can be had. Small stock and fixtures, somewhere in Pennsylvania, Ohio or New York. "P 675," care Keystone.

GENEVA combined retinoscope and ophthalmoscope, used 2 years, electric and gas lighting attachment. Also Geneva adjustable table, new. "B 720," care Keystone.

WANTED, second-hand ophthalmometer. State lowest cash price. H. J. Pollard, 709 Market St., Wilmington, Del.

TRIAL cases wanted, traveling and office styles, also Geneva retino-ophthalmoscope and Chambers ophthalmometer. Describe fully. Wm. Harris, 307 W. Madison, Chicago, Ill.

FOR SALE

STORES, STOCKS AND BUSINESSES

\$6000 WILL buy fine established jewelry business in sunny California—no winters. Big profits; must sell. It will pay you to investigate. "G 685," care Keystone.

ABOUT \$1800 will buy the nicest little jewelry store in Western Illinois. Business over \$12,000 in 34 months, \$542 in February, wish to retire. Box 514, Abingdon, Ill.

FOR SALE

STORES, STOCKS AND BUSINESSES

\$700 PAYS for stock and fixtures in a growing Wisconsin town, pop. 1000; no opposition. Store rents for \$7 per month; have city water and electric lights; town has 6 miles. Owner must go to warmer climate on account of health. Can reduce stock, if necessary, or sell at invoice. "B 678," care Keystone.

RARE chance to buy an old-established jewelry business, in Illinois town of 12,000. Will sell for 80 cents on the dollar. Poor health the reason. "H 681," care Keystone.

JEWELRY and optical. Snap for optician, books show average fittings of one thousand pairs per year. Good jewelry trade and good run bench work. Be sure to investigate this. You must have at least \$1500 cash. C. S. Apple, Statesville, N. C.

JEWELRY and optical business in town of 5500—New York State; best locality, 4 railroads. \$7000; will reduce to suit purchaser. "B 671," care Keystone.

BEST jewelry store, largest stock, best location; 30,000 pop. Growing city on Puget Sound, Wash. Cash business \$30,000 annually for past 4 years. Invoice about \$24,000; can reduce. Cash only considered. Address, "B 395," care Keystone.

RETIRING from business; established 1887; \$5000 invested. Total yearly net profit, \$3700. Ideal climate, Piedmont section of Carolina; 20,000 pop. Good prices and fair competition. Don't write unless mean business and have the money, or good collateral. No discount. "H 673," care Keystone.

MATERIAL department of a well-established wholesale jewelry and material house; Western city. Address, "M 676," care Keystone.

DO you want to engage in the jewelry business in one of the largest, best-growing cities in Texas? Well located, fine mahogany fixtures. Stock and fixtures \$8000. Can reduce stock one half. An exceptional opportunity for some one with ambition. Ad., "H 708," care Keystone.

\$2000 BUYS the only jewelry, optical and repair business in good central Wisconsin town, about 1000 inhabitants, in midst of thickly settled dairy country, farms are selling for from \$50 to \$100 per acre. No opposition within 12 miles. Three small towns to draw from. Stock is clean and up to date, mostly staple. This is a chance of a lifetime. Reason for selling, other business. "B 706," care Keystone.

JEWELRY stock and fixtures in town of 800. Invoice \$900. Three brick plants and coal district. Only jewelry store in town. Sell at bargain. Oleson Bros., Lehigh, Iowa.

JEWELRY and optical store, southern Wisconsin. Stock, tools and fixtures \$1000; building and lot \$800. Write for particulars. "S 691," care Keystone.

A GOOD chance to buy a newly equipped jewelry store for one-half cash and easy terms for balance. All the repair work you can do; must be sold by June 20th. Change of business the reason for selling. Stock will invoice \$2000. Address, John C. Stortz, Point Pleasant, W. Va.

JEWELRY business in rich farming section of Iowa. One of the most prosperous and best established stores in the country; stock and fixtures \$3500; pop. 2200. A good opportunity for a good man. A. B. Jones, Stuart, Iowa.

FIRST-CLASS optical establishment, doing a fine business in a large mfg. city, with suburbs estimating to 150,000 people, 80 per cent. of them wearing glasses owing to the kind of goods manufactured that good sight is required, can buy as much stock as you like. Must have \$1000 cash for fixtures. The reason for selling, owner wants to retire from old age. "R 690," care Keystone.

JEWELRY business at invoice; no discount. Work for February, \$116.50; Ohio railroad town, 10,000. Failing eyesight. Good chance for energetic young man, who can handle railroad watches; must be first-class watch repairer. About \$3500 required. "P 686," care Keystone.

JEWELRY business for sale, southwest Texas. Cash receipts, 1905, \$10,982.59. Takes \$5000 to buy. Its a first-class thing and will bear the most rigid investigation; best of refs. Don't write unless you have the price. Wife's health forces me to sell. Address, "S 689," care Keystone.

JEWELRY store; glove manufacturing city of 10,000; 12 years in business. Best location; repair work pays expenses. Stock has been reduced to \$4000; cash only. W. B. Greenland, Johnstown, N. Y.

GOOD opportunity for young man, with \$4000 to \$5000, in wholesale material house doing good business; Western city. Address, "M 677," care Keystone.

ONLY jewelry store in town of 1200; in Iowa. Nearest competitor 11 miles. Will sell at invoice \$2000; can reduce. Good opportunity. Address, "T 707," care Keystone.

HOW does this Colorado proposition suit you for \$6000? Business over \$14,000 a year; work about \$150 a month. December alone each year averages \$2244. Don't be afraid to investigate. "D 550," care Keystone.

AN opportunity to buy a good paying jewelry store in prosperous county seat. As I am going west will sell fixtures and whatever amount stock you wish; must sell by May 10th. Geo. Hasslinger, Jackson, Mo.

(Continued on page 702)

FOR SALE

STORES, STOCKS AND BUSINESSES

(Continued from page 701)

ONLY jewelry and optical business in town of 1200; in Indiana. Nice clean stock; invoice about \$1700. Good reasons for selling. Ad. "M 693," care Keystone.

ONLY jewelry store in modern town of 800; fine farming district. Up-to-date stock of watches, jewelry, china and cut glass; did a \$3500 business in 1905. Invoiced with fixtures, \$1200; can reduce stock. Going in other business. A. C. Radke, Bangor, Wis.

WANTED, to sell as advertised in March Keystone, or will take energetic and experienced jeweler of proven ability as partner. He must buy an interest of at least \$10,000, and be capable of assuming its entire management. The finest store and stock on the M. K. and T. Ry. anywhere between St. Louis and Dallas. Correspondence invited. Fred McIntire, South McAlester, Ind. Ter.

JEWELRY store, \$3000 cash down, balance time. Phil Levy, Henderson, Ky.

JEWELRY business, stock and fixtures; a town of 1000. Must be sold; not able to manage. For particulars, write Mrs. M. Schmidt, 1612 Prairie Street, Milwaukee, Wis.

JEWELRY stock and fixtures in town of 1000 pop.; large territory to draw from. Good optical business and a cash trade. Good reasons for selling. Address, Lock box 317, Thorp, Wis.

GOOD location; building, fixtures, tools, trial case, etc. Small stock—rest has been closed out. In county seat over 2000; one other store. Poor health. Write at once to J. E. Smith, Albion, Nebr.

ONLY jewelry store in town, 1000 pop. Stock and fixtures invoice \$2200. Can reduce stock. Good reasons for selling, have been in business here for 16 years; sell for cash only. L. C. Pedersen, Walnut, Iowa.

WELL equipped manufacturing jewelry shop, in a 40,000 pop., rapidly-growing Western city. Good machinery and an old-established place. Address, "S 594," care Keystone.

JEWELRY store in Austin, Pa., doing a good business. Box 696.

\$2000 BUYS a splendid jewelry business in the prettiest town in Nebraska. Good schools, churches and a fine bench trade. Established 1880. Can reduce to \$1000. Address, S. Rhodes, Ulysses, Nebr.

JEWELRY stock and fixtures. Good reason for selling. Box 53, Huntsville, Mo.

JEWELRY business, well established in fast-growing town in Montana; 2 coal mines and rich mining country tributary. Business center of several new towns. County seat of richest county in State. Local pay-roll \$50,000 monthly outside of others. Rare opportunity. Present invoice about \$2200. Owner wishes to care for other interests. "R 645," care Keystone.

JEWELRY store in good business location for sale, with or without stock. Stock \$5000; fixtures, tools and material \$2000. Repairing amounts to \$200 per month. Business for 1905 over \$13,000. L. G. Klotten, 2202 Central Ave., Cincinnati, Ohio.

ESTABLISHED 30 years, Wisconsin city of 5500. **J**ewelry stock and fixtures invoice \$5000; can reduce stock. Profits last year were \$3247. Retiring, poor health. Address, "L 627," care Keystone.

NICE jewelry store—musical and fancy goods. Reason for selling, came from Nebraska—climate not agreeable. Applicants send stamps, or come see us. M. Hertzstein, 992 Payne Ave., Cleveland, Ohio.

\$2500 SPOT cash buys first-class jewelry store. Stock and fixtures invoice about \$6000. Good fixtures, stock up-to-date; county seat; 7000 inhabitants; 3 jewelers. Don't write unless you have the cash. C. Van, Centerville, Iowa.

\$3500 OLD-ESTABLISHED, well-paying jewelry business; new fixtures. Wisconsin town of 3300. Competition, one other store. This is a snap. "H 702," care Keystone.

A SMALL, well-established jewelry store in a Colorado town. Altitude too high for present owner. Address, "R. I. C.," care Lapp & Flershem, 195 State Street, Chicago, Ill.

JEWELRY store in Owensboro, Ky.; pop. about 15,000. Stock reduced to \$500 or \$1000; present stock about \$5000. Apply Louis Lehs, care Rudd House, Owensboro, Ky., or Louis L. Grey & Co., 79 Nassau St., New York.

JEWELRY business, established 6 years; invoice \$2500. Pop. 7000. Only one other jeweler in town. Wish to retire. Box 246, Barberton, Ohio.

ONLY jewelry store town of 2500, for sale. Good run of work, 25 miles from New York, \$1500. Can reduce stock if necessary. Address D. care J. Herzog, 59 Maiden Lane, N. Y. City.

ONE of the best paying jewelry businesses in Texas, sold \$13,279.20 worth last year. 18 years here, the only jewelry store in the town. 6000 people. Stock \$6864.60, fixtures \$1647.15. Going to retire from the jewelry business on account of health. Rent \$35.00, best stand in the town. Will give a very good discount if all cash, but will give time on part if party wants it. Fixtures been in use about 3 years. If you mean business write or wire me. Repair work will average \$100 per month. J. F. Clark, Abilene, Texas.

JEWELRY and optical. Invoice about \$4000. Box 277, Monrovia, Cal.

FOR SALE

STORES, STOCKS AND BUSINESSES

JEWELRY store must be sold at once on account of death of owner. Established 55 years. Invoices over \$1000. Thriving county seat of 6000, with numerous industries. 2 railroads; low rent. Will be sold cheap. Mrs. A. W. Woodcock, Salisbury, Md.

JEWELRY business in thriving town of 9000 pop.; established 20 years. Conducted by the late Geo. W. Sayer. Stock, including jewelry, optical goods and fixtures of a first-class business, \$5500. M. Sayer Osborn, 110 Main Street, Spencer, Mass.

ESTABLISHED jewelry business, good town of 15,000. Stock will invoice about \$2500. Will give 10 per cent. for cash. Reason for selling, have other interests West. "R 647," care Keystone.

YOU can have a good thing if you have the money. Read my advertisement in January KEYSTONE. E. R. White, Main and Glenwood, Buffalo, N. Y.

AFTER April 10th will sell my jewelry and optical business, in town of 1200; on Southern Pacific lines in Oregon. Prefer selling tools and optical outfit with jewelry, stock, fixtures, etc. Have mining and other interest which require all my time. About \$1500 required; though stock can be reduced. Opposition easy. For particulars, "F 724," care Keystone.

\$1000 CASH buys fixtures, plated ware, clocks, bric-a-brac, principal jewelry store. Established 10 years. Receipts over \$5000, November to date. Paying cash business; watchmaker, optician. Box 413, Lakewood, N. J.

STORE, stock and fixtures of one of the oldest stores in Chicago at a bargain. Established in 1869. Can reduce stock to about \$5000. Wish to retire owing to age and health. Address, Samuel Watson, Room 1201 Heyworth Building, Chicago.

\$2000 BUYS a splendid jewelry business in the best town in south Alabama. Fine bench trade; pop. 4000. Good reasons for selling. If you mean business, address, "L 722," care Keystone.

35 CENTS on the dollar buys \$3000 stock, watches, chains, charms, buttons, pins, rings, silverware, Moseley lathe, tools, repairing material; well assorted stock, stored at present. Must be sold by April 15th. P. O. box 601, Kansas City, Mo.

PROSPEROUS jewelry business in one of the best towns in Indian Territory. Stock and fixtures all new; bench work \$150 monthly; December sales \$3000. Invoice \$4000. Sick, must sell. "P 574," care Keystone.

TWO-STORY brick jewelry store, up-to-date stock and fine oak fixtures for sale. Town of 1500 inhabitants; bench work runs \$100 per month. Half cash or bankable paper; balance on easy terms. Address, H. G. Lau Bach, Franklin, Nebr.

ON account of old age I desire to sell my stock and fixtures. It will inventory about \$2000. This proposition will bear investigation. Ad., John Greaves, Rolla, Mo.

OLD-ESTABLISHED jewelry and optical store, county seat and wheat belt of Kansas. No competition. Address, "M 714," care Keystone.

STOCK of watches, clocks, jewelry, cut glass and musical instruments will be sold cheap for cash. F. E. Lenhart, Argyle, Minn.

HANDSOMEST store in north Missouri town of 5000. Stock and fixtures invoice about \$6500. Good-paying business, large repair trade. All modern golden oak fixtures. No old stock. Write for further particulars, if you have cash and mean business. "F 718," care Keystone.

\$500 JEWELRY store; watch and clock repairing; not fixed up for sale but where I have supported myself and family for 40 years. E. H. Fairbanks, 713 Centre St., Jamaica Plain, Mass.

FIRST-CLASS up-to-date jewelry store in one of the best towns in Idaho. Plenty of work. Choice location. Will sell fixtures and all or part of stock. Will invoice about \$8000. If you mean business and have \$3000 or more, write. Memhard & Miller, Spokane, Wash.

JEWELRY store in Oklahoma college town of 2000. Profits last year \$1985. Rent, light and heat \$10.00 per month. Invoice \$2000 to \$2500. "E 716," care Keystone.

JEWELRY store in small town, southern Michigan. No competition. Inventory \$1200. Good run repairing and optical work. Sick—only reason for selling. "S 725," care Keystone.

AN optician who can engrave can buy an established office business of excellent standing, in fine Ohio city on the lake, averaging last 17 months \$132 net monthly and growing, showing 160 per cent. increase over previous 16 months. Fine opportunity. First offer \$1500 cash accepted. Bank reference. "S 728," care Keystone.

\$500 SPOT cash will buy optical goods, watch tools and materials and fixtures costing approximately \$1367, including a fine location. Other business, must close out at once. Address, 105 South Center St., Bloomington, Ill.

ONLY jewelry store in town, pop. 1400, in Pennsylvania; no jeweler within 8 miles. Invoice about \$1500. Good reasons for selling. Address, "C 608," care Keystone.

FOR SALE

UNDER THIS HEADING THREE CENTS PER WORD

MISCELLANEOUS MERCHANDISE AND EQUIPMENT

LATEST model Geneva retinoscope and ophthalmoscope, \$50; cost \$80. 34-inch iron spec. sign, \$4; cost \$8. Kohlbusch diamond scale, \$6; cost \$12. All good as new. Address, "W 670," care Keystone.

JEWELER'S regulator, 3-jar mercury pendulum. Burt Carter, Clay Center, Kans.

A FEW second-hand travelers' trunks at a bargain. Penj. Allen & Company, Silversmiths' Building, 131-137 Wabash Avenue, Chicago.

ONE electric $\frac{1}{2}$ H. P. motor; 10 cells Edison-Le Clanche batteries; practically new. Cheap. E. S. Austin, Delavan, Wis.

GENEVA trial case, morocco leather cover; 32 pairs each + and - sphericals, 12 to 20 diopters; 20 pairs each + and - cylinders, 12 to 6 diopters; 10 prisms $\frac{1}{2}$ to 20°; 2 perforated disks; patent stenopaic slit, Maddox rod, 2 Colbred disks; revolving trial frame, extension temple. All in good order, for \$80. Gabriel Jewelry Company, Mobile, Ala.

LATHE, Swiss universal, complete with slide-rest, etc.; retinoscope, standing all adjustments; engraving block. All in good condition. A bargain. Box 478, Springfield, Ohio.

STEEL-LINED safe, chronometer, regulator, cash register and jewelers' fixtures. "Jeweler," 629 Davis St., Evanston, Ill.

\$25 BUYS a complete Fowler trial case; 1 $\frac{1}{2}$ inch lenses. Dr. Braud, Joliet, Ill.

\$11.50 BUYS new Geneva lathe; centering tool and drill-stocked fitted. I. C. Dunlap, Bedford, Ind.

SAFE, rolls, screw and drop presses, dies, desk benches, lathes, drawbench, etc. Wm. P. Sweney, Reading, Pa.

\$20 OPHTHALMOMETER made by E. B. Meyrowitz. F. Buck, 933 Spring Garden Street, Philadelphia.

ONE Geneva ophthalmoscope and retinoscope combined, with table and traveling case; has only been in use 4 months. Carr & Ganter, Glasgow, Ky.

THREE months' tuition in the Philadelphia College of Horology; cheap for cash. "F 704," care Keystone.

WALNUT wall case, felt-lined; slide-up doors, 10-feet long; good as new. Cost over \$100; \$50 takes it. A. Kuckuk, Shawano, Wis.

SLIDE RESTS. I have a few fine slide rests of special construction and superior workmanship which will be sold at a price away below their true value. Those who get them will be fortunate. If you don't use a slide rest, let me tell you why you should. Write me your address; I will send full information why these are superior tools and the price. John J. Bowman, Lancaster, Pa.

AMERICAN Watch Tool Co.'s lathe and attachments cheap. Fredrick Mason, 817 West Third St., Davenport, Iowa.

TEN horse-power runabout automobile, wheel steer, practically like new, except tires; \$350. Demonstration solicited. Lawrence, optician, Winsted, Conn.

CHEAP—Thompson winking eye, in good working order, cost \$25; spring motor. Price, \$10. Lincoln Optical Co., Lincoln, Nebr.

AUTOMOBILE, Rambler with extra rear seat, \$200. F. Catlin, Winsted, Conn.

DE ZENG refractometer, axis register; optical books. Write me. R. L. Grimes, Dows, Iowa.

WATCH sign, Barnhart, 3 feet; good condition. Trial case, leather, 1 $\frac{1}{2}$ inch lenses. Heisterman & Zechman, Germantown, Ohio.

FOR SALE OR EXCHANGE

UNDER THIS HEADING THREE CENTS PER WORD

INSENG seed \$10 per thousand. Want face-plate and Snyder chuck for Webster-Whitcomb lathe, Little Giant ring bender, mill with two flat and one ring roll, trial case, curtain top desk, or what have you? O. H. Pitkin, Gallion, Ohio.

GENEVA lathe, 12 chucks, foot-wheel and countershaft—lathe is true. Best offer takes it, or will exchange for violin. W. C. Martin, Belding, Mich.

ANCASTER engraving block with attachments; one 5 x 7 view camera. Want a trial case. G. A. Hyde, East Smithfield, Pa.

I WILL trade second-hand optical instruments for prismometer, ophthalmometer, ophthalmometer, phorometer, Johnston optometer. State in your first letter lowest cash price for what you have got and what you wish to trade for. Ad., J. S. Sherman, Marcellus, Mich.

PATON & Glover engraving machine, used very little. Frank Bernhardt, Butler, Mo.

ONE Hardy ophthalmometer, electric light attachment, adjustable table; guaranteed to be in good working order. Cost \$82. Want hammerless shotgun, standard typewriter or New Century engraving machine. H. E. Gragg, Morocco, Ind.

ONLY jewelry stock in town of 1200 in best part of Illinois. Invoice about \$2000. Will trade for farm. Give full description in first letter. "E 674," care Keystone.

POSETTE or geometrical lathe, with many attachments. Ad., Kerr Repairing Company, Providence, R. I.

FOR SALE OR EXCHANGE

ENGRAVING machine, like new, for an American lathe; or what have you? Chas. Schultze, 768 Tremont Ave., New York City.

\$4000 FIRST-CLASS jewelry business in good Wisconsin town, fine farming country, for jewelry business on the Pacific coast, or good business property. "H 703," care Keystone.

WATCHMAKERS' tools, lathes, attachments. Want diamonds, watches, or offer. Courtney, 8 Washington Building, Cincinnati, Ohio.

RARE old violin, worth \$350. Will sell for \$300, or exchange for jewelers' fixtures, watches, clocks and jewelry. A. Gates, Waynesville, Ill.

TWO shotguns; 44 Smith & Wesson revolver, 6 $\frac{1}{2}$ inch barrel; retinoscope, kodaks. Want small rifle or tools. W. Kantlehner, West Branch, Mich.

AIR pressure lamps, 6 gravity, bench, watch rack, square upright oak show case. Prefer watches. O. M. Campbell, Abingdon, Ill.

BRUNSWICK alleys, only amusement in town; did \$4200 last year. Price, \$1000. Trade for land. O. M. Campbell, Abingdon, Ill.

SPECIAL NOTICES

UNDER THIS HEADING THREE CENTS PER WORD

GET the best balance staffs and jewels. Order direct from the makers; every one warranted. No student's work. Tarbox & Gordon, Omaha, Nebr.

BEWARE of second-hand Clement combined lathe attachments offered for sale. They are old models; they sell them to get our latest. See our ad. in this number. W. D. Clement, Waltham, Mass.

MONEY loaned to jewelers. Write for information. The Collateral Loan and Banking Co., 143 Euclid Avenue, Cleveland, Ohio.

ONLY \$40. A whole set of lathe attachments in the Clement combined lathe attachment. Why not consider it? Used the world over; recommendations from everywhere.

GET the latest screw case remover, very effective; cannot mar case. Sample prepaid, 25c. Satisfaction guaranteed. A. S. Halsted, watchmaker, Cornwall-on-Hudson, N. Y.

LOST—16 size Waltham, 15 jewel, No. 12225887, in 20-year gold filled case. \$5.00 reward if returned to J. H. Gallemore, Wewoka, Ind. Ter.

FOR rent. Best location for up-to-date jewelry store in Pennsylvania. Rent, \$75 per month. Excellent opportunity. Loeb Bros., Du Bois, Pa.

WATCHMAKERS! Don't fail to notice the advertisement of the Ideal Button Company and try a dozen. Looks like hand cuffs, and works like a charm. A very thin rectangular post. Sells at sight.

THE Clement combined lathe attachment, costs \$40. See page 544. Fine, new, complete catalogue free.

BUSINESS NOTICES

UNDER THIS HEADING THREE CENTS PER WORD

PHILADELPHIA'S finest and most complete workshop. Jewelry, watch case and watch movement repairing, engraving, diamond setting, mounting and special order work. Repair work returned same day received. Finest workmanship at lowest cost. Your old gold, broken jewelry is worth more than bullion value for repair purposes. Get our offer before selling it. Benjamin Gebhard, 735 Sansom Street, Philadelphia.

WATCHMAKER'S tools, optical and photo. outfits, kodaks, moving picture machines and stereopticons, bought, sold or exchanged. The Exchange Co., Box 256, Elwood City, Pa.

THE Clement combined lathe attachment, costs \$40. See page 544. Fine, new, complete catalogue free.

YOU are looking for a good reliable firm to do your watch work. Here is the place. W. K. Sandberg, watchmaker to the trade, 802 Columbus Memorial Building, Chicago.

WE make a specialty of changing old antique watch cases to sten-wind. Something that has been refused by others. Have had 40 years' exp. and can guarantee satisfaction. N. J. Felix, 18 John Street, New York.

NOTICE.—I have moved from 727 Sansom Street to 807 Sansom Street, Philadelphia, where I will continue to buy all kinds of old gold and silver; also refine all kinds of jewelers' waste containing gold or silver. Send by mail or express and receive prompt attention. J. L. Clark. Established 1870.

WANTED, every one desirous of improving themselves in watch work, jewelry work and engraving, to address Bradley Polytechnic Institute, Peoria, Ill., for one of their latest catalogs. A postal card will get it. See ad. on page 634.

ADMINISTRATORS, receivers and merchants desiring to dispose of any jewelry stocks, any size, or surpluses, for spot cash, write at once to Boesma League, Syracuse, N. Y.

BUSINESS NOTICES

ELGIN Horological School, the oldest and most practical school for watchmakers. Send for catalogue to Elgin Horological School, Elgin, Ill.

ONLY \$40. A whole set of lathe attachments in the Clement combined lathe attachment. Why not consider it? Used the world over; recommendations from everywhere.

ANTI-TANGLE eyeglass hooks; 68c., \$1 and \$1.50 dozen. Something new. Try them. See page 690.

ENGLISH trade. Experienced business man, established in London with good offices, competent staff and sound connection for American goods among jobbers and general merchants (fancy goods, watches, clocks and kindred lines), is ready to take up direct representation of one or two reliable manufacturers. First-class American and London refs. Address, "Energy," care Chas. H. Fuller's Advertising Agency, 203 Temple Chambers, Temple Ave., London, E. C., England.

WERE you one of the hundreds who sent 35c. to G. H. Fullett, jeweler, Jeffersonville, Ohio, for a practical screw case remover as advertised in March Keystone?

THE Omaha Watch Repairing, Engraving and Optical Institute is strictly first-class and if you will give us a few months of your time and follow our advice and instructions, we will enable you to accept a better position and increase your salary. We give you a business training which qualifies you for the highest position. None of our graduates are earning less than \$20 per week and several of them more. We have more applications for good men than we can possibly fill. This cannot be truthfully said of any other school in the United States. Write for prospectus. Dr. Tarbox & Gordon.

Too Late for Classification

SITUATION WANTED—By graduate in pharmacy registered in Iowa, also jeweler and optician; strictly sober; age 23. "R 730," care Keystone.

HELP WANTED—Optician, engraver and jeweler; capable of taking entire charge of optical department. Send refs., photo, and sample of engraving. F. Truby, Coffeyville, Kans.

PEARLS BOUGHT FOR CASH

If a customer should bring you any Diamond Jewelry or any Pearls to sell, and you do not care to buy them yourself, send them to

CHAS. S. CROSSMAN & CO.
3 Maiden Lane New York
where you can have an immediate Cash Offer
—Established 1880—

High-Class Repairing for the Trade

Our work is the kind you call your own
L. E. WINSLOW
407 Masonic Temple CHICAGO, ILL.

Do You Want a Fine Location

in the prettiest town in Kansas? If so, here is a chance to step into an established, well-paying jewelry and optical business. Stock and fixtures all new. Bought about a year ago. Low rent; city owns electric light and water-works; free mail delivery; cheap fuel—coal mines now being opened up near city. Garden spot of Kansas. Thickly populated, 50,000 people in county. County seat, fine schools and churches. Mild winters. 125 miles south of Kansas City, the nearest large city. If you have about \$2500 write. This is a bargain and means a fortune for the right man. Reason for selling—other business which needs my attention. Personal investigation invited.

H. C. WILLIAMS Girard, Kansas

Selection Packages of

Jewelry and Swiss Watches sent to all reliable jewelers

We carry best material at reasonable prices.
We do work for the trade.

Send for Latest List

Philip Katz & Co.
51-53 Maiden Lane
New York

Jewelry, Watch and Watch Case Repairing for the Trade

Send for our Price-List

Our Motto: **Quick Service**
Work returned same day as received
Memphis Jewelry Mfg. Co.
81 W. Court St. Memphis, Tenn.

REMOVAL NOTICE!

On or about May 1

The Lyons Gem Co.

14 Maiden Lane, New York
Will Remove to 35 Maiden Lane

A full and complete line of Precious, Semi-precious and Imitation Stones always in stock

Our Specialty is Scientific Rubies

Local and out-of-town jobs promptly attended to at reasonable prices. Send us your mountings to be set with matched stones. A trial order will convince you that our prices are right, and our goods select.

LEARN JEWELLERS ENGRAVING

"The Engraving School That Graduates Experts." A fascinating, high-salaried and easily learned trade, taught thoroughly and practically by correspondence. Your instructor is the foremost authority and master workman in the world. We will teach the beginner better engraving by correspondence than he can gain in years of rigid apprenticeship. We will improve the skill of any engraver one hundred per cent. and make him master of the trade. The demand for competent engravers far exceeds the supply. Send for handsome illustrated prospectus.
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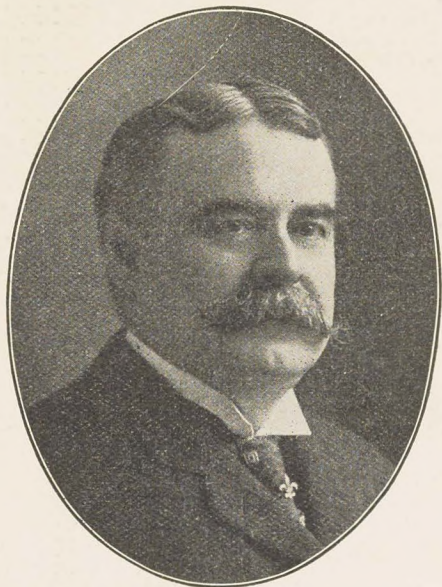
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H. R. PLAYTNER 115 East King Street
DIRECTOR Toronto, Ont.

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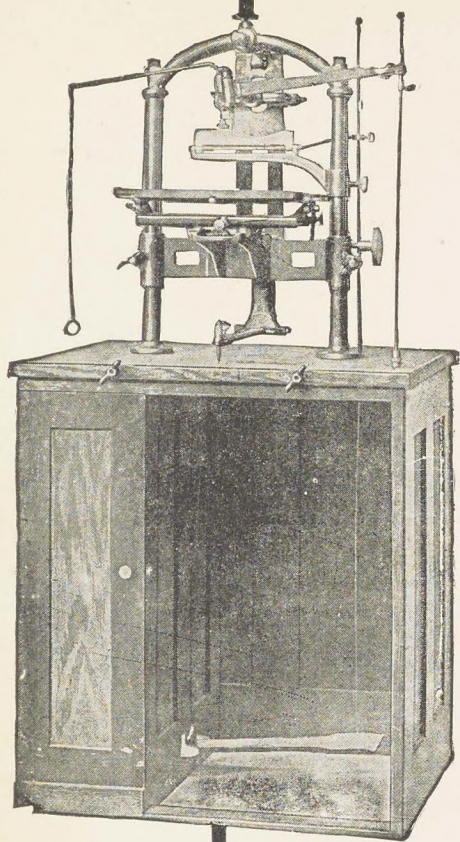
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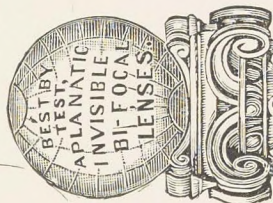
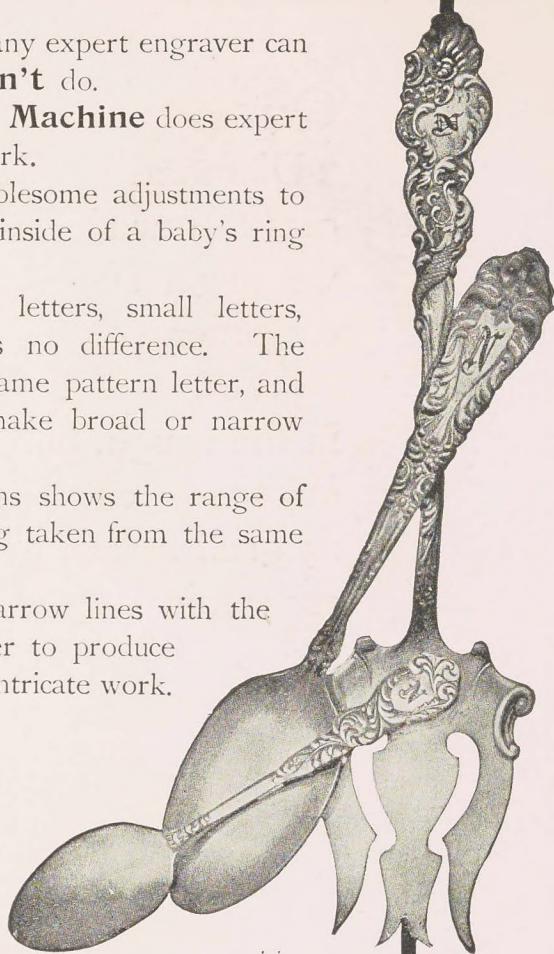
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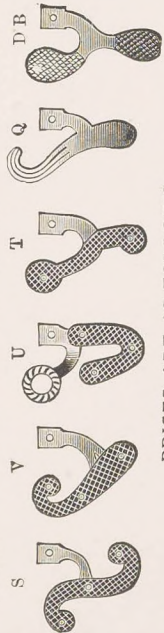
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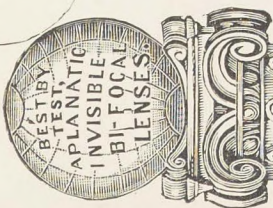
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